# THE FARMERS' CABINET,

AND

# AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

Vol. X.—No. 9.] 4th mo. (April) 15th, 1846. [Whole No. 135.

PUBLISHED MONTHLY,

BY JOSIAH TATUM,

EDITOR AND PROPRIETOR,

No. 50 North Fourth Street,

PHILADELPHIA.

Price one dollar per year.—For conditions see last page


For the Farmers' Cabinet.

## Use of Guano.

As the season is now opening for the commencing of agricultural matters, the following remarks on guano, which is to be used this year more than at any preceding season, may prove of some importance to those who have had no experience in the use of it.

So few experiments have been made in this country on a scale that would satisfy the agriculturist, that it is almost impossible—it would even be an act of presumption—to decide upon its merits in terms of unqualified approbation; and still more difficult and unwise to condemn it with unqualified censure. Most of the experiments that have been made, belong rather to the minor department of horticulture, than to the more general and more important one of agriculture; yet it is only so far as these go, and so far as we have the experience of England, that any opinion can be formed of the value of this new material. In England there appears to be no question whatever among her best farmers, that it is the most powerful manure ever yet known. We might give results taken from the agricultural periodicals of that country, that would prove incontestibly its influence there. But although we may take these statements as truths, and coming from so many and such impartial sources, as fully deserving our unreserved reliance, yet, before we adopt the practice of other countries, in matters of such vital importance as the manuring and management of our land, on whose products the very subsistence of millions depends, it is absolutely necessary for us to know how our modes of agriculture agree or differ—what is the character of the soil to which the application of this article or any other has been made; and above all, whether a difference in climate will prohibit, or a similarity admit, of repeating here experiments, however successful they may have been there. As to the two first of these matters that we consider as necessary elements in deciding precisely and positively, of the propriety of transferring British practice to American fields, it will not be easy to get any very thorough information. It may be said in general terms, that the best farming in England, is more of an art than it is here—that from the enormous rents that are paid for land from the excessive taxation—though we are gradually beating up to the old country in this particular—that

every penny that is expended, is laid out after close calculation, and all the details of the farm, and all its expenses looked after with a nicety and an anxiety, which, however proper and commendable, would be a most painful duty to an American in the present circumstances of the country. Then the price of labour is so extremely low there, and population so plenty, that a farmer of even moderate means, can afford to buy the services and appropriate to the different operations of the farm, several men, women, or children, as the case may require, without increasing materially his outlay, or endangering his returns. While here, at least, in our free States, and it is in these alone, that agriculture attempts or carries through any improvement, all these things —done in England by so many—must be effected by the farmer himself generally speaking, or left undone. This gives double duty to the American farmer—his whole time is occupied—he cannot afford to throw away a chance—to leave an old long tried system, with which he and those who have gone before him have been successful—and take up any new project, though it comes recommended by very lofty pretensions. He must wait till it has the sanction of experience, before he takes it up. Such being the difference in the character and condition of the art, and the individuals who practice it in the two countries, we can very readily suppose that an English farmer can carry through a series of experiments with more ease than an American, and that although a want of success may be more sensibly felt by the first than the last, yet that they can be much more efficiently and thoroughly performed. As to the climate, which is the next thing to consider, all of us in this country, who undertake to adopt and recommend English modes of farming, must remember that England is the land of rain and fog; that these two succeed each other with such slight and short intervals of sunshine, that a warm day or a bright sky, are compliments very sparingly presented by heaven to the inhabitants of that great country, but little island. Here, matters are very differently disposed; our climate is always in extremes—we have droughts, that almost dry up realms to deserts; rains that would drown us, if they did not stop; cold, that causes us to regret the absence of the sun's fiery influence; and heat, that makes us look with anxiety for an iceberg. These produce wide differences between the climates of the two countries, that it is absolutely necessary for us to consider when we are recommended to adopt any thing that has succeeded in England. Yet we believe it is a fact, that the animals which have been introduced here from that country, have all, without any exception, been of the greatest advantage to our farmers. The horse, for which we are almost exclusively indebted to England, certainly has not degenerated; nor the Durham cattle; nor the pig; both of these seem to be at home in many parts of our country; the last especially, in Chester county, appears to have found a climate and food and a general management so favourable, that he takes the opportunity of developing himself to a size that seems unknown anywhere else. On the whole, then—admitting these statements—however cautious the American farmer should be in adopting the improvements of other countries, it does not appear that the difference in climate is so great as to make anything else than moderate caution necessary. In this particular subject before us, it happens that there is no occasion for looking to England alone for its use or usefulness. Guano has been employed in Peru for centuries—a country whose soil or climate bears no analogy whatever with those of England, and very little, except in the extreme strength of the sun, with our own. There it is almost the sole manure; and so highly valued as to be placed under the protection of the Government. We have now attained two strong arguments; the experience of ages in one country, and the results of several years of successful use, in one of the most highly cultivated lands in the world, and where there is the most vigorous application of mind, science and capital, now at work. So far as these go, they are certainly very much in favour of our making experiments with this manure, even if there were no other reason; yet for the very good one, that our agricultural mind may not appear less active than that of other countries, or our farmers appear more disposed to reject with obstinate indifference, the generous endeavours made by other countries to advance the science to which they are attached, and urge on the great national interest, to whose improvement they are pledged. They should not be deterred or discouraged either by the idea of the superior qualifications of British farmers, or their greater wealth; or any other reasons suggested rather by their fears or their indolence, than by their judgment. Instead of such motives acting on our industrious and enterprising farmers, they would, if they visited England, be surprised to find how much reason there was for being proud of their success, even under the discouraging circumstances of small capitals and a meagre supply of labour. There is a great deal of bad farming in old England, more, perhaps, when we consider the circum-

stances of the two countries, than there is here, so that, in truth, our farmers have no occasion to shrink from attempting what has succeeded there. There is but one department of agriculture from which they need withhold, through the dread of competing with English farmers,—that is systematic breeding: this requires more time, attention, and means, than our people are willing to give to a thing, though of great importance, yet of little or no immediate profit.

For the use of guano in this country, besides these general reasons, there are the particular ones offered by the article itself. Its component parts are precisely those we want for manure, and precisely those we have in the manures usually employed, but in a far more concentrated form. It appears from the analyses made by many distinguished chemists, to contain everything that is wanted to act on soils and increase their powers of producing, as well as every ingredient contained in plants. From this it would seem expressly designed for a strong action on vegetable life, and expressly calculated for the restoration of worn-out soils. In this country, as we have before said, the experiments have been so few and on so small a scale, that we cannot bring forward much of a practical and definite nature to bear out this opinion. All that has been done here, however, proves it, and if we choose to admit the success of England, there is no doubt or question on that point. In the experiments that were made last year in different parts of the country, it should be borne in mind that the season was extremely unfavourable. The drought at the commencement of the season, and the long continued and excessive heat, would have kept back the action of any manure, more particularly of one that must have moisture for its decomposition. There was besides a very severe frost in the spring, that killed acres of wheat and cut down potatoes and corn: this, with the aid of the cut-worm, in some cases very much diminished the anticipated glories of the guano. But as far as the experiments made in East Bradford, went, they prove the strong action of guano on vegetation. The clover and the grass were both very much increased; the corn which was moistened with a solution of guano, showed itself sooner than any of the rest of the field, and appeared, until attacked by the frost and worm, much the most flourishing. For so slight an application, this was all that could be expected; but if this had been followed up by the Peruvian mode of throwing the guano about the roots after the corn reaches a few inches in height, and then again when out in tassel, the full effect would have been seen, and a general conclusion could have been drawn, as respects its action on this vegetable. But unless each plant had been watered after these applications, the excessive drought would have caused disappointment, and the manure considered in fault. A gentleman near Boston, on a poor, sterile, sandy soil, planted a few hills with the variety known as sweet corn. A teaspoonful of guano—South American—was mixed with the soil when the corn was sown. A second application was made when the grain was a foot or more in height; the earth was drawn away from the hill, and about three spoonsful thrown in. It was not placed near the stem, but five inches or more from it; the trench made by the hoe, was three or four inches in breadth and a half to two inches deep. The whole was then profusely watered. The product is stated to have been much beyond that which received no guano. Besides these, we know of no experiments made on corn. We cannot appeal to England here; but if this manure is to be used on this, our staple, more experience must confirm its value, and the judgment of our own people direct its application. On grass and clover, the greatest satisfaction has been expressed as to this manure. It has been tried on different soils; at Germantown, Massachusetts, and Chester county; in each of these districts the benefit has been very marked. So far as the experiments in the latter region go, the result was very remarkable, when the season is considered. They were made without any experience but that of British farmers to direct; the result was most satisfactory; and the question presents itself—if this material can produce such excellent effects during a season so entirely unfavourable as the last summer, how much more considerable would they have been in one of more rain! On the potatoe, it will be seen from the account of the experiments made in East Bradford, published in the Farmers' Cabinet of September, that the action of the guano was very marked. Those plants cultivated with it came up the first, and grew far more rapidly than the others, which had only barnyard manure. The crop of turnips was also much increased, or rather, it should be said, was supposed to be—as there was no other ground manured in any other way and sown with that vegetable, it is impossible to make any comparative estimate. We have in this superficial and unsatisfactory way, given all the positive knowledge we possess. By others, this manure has been tried on peas, melons, strawberries, cabbages, cauliflowers, grapes, and hot-house plants, successfully

and satisfactorily in every case, but as they do not belong to agriculture, it will not, perhaps, be thought worth while to notice them more particularly. As to the mode of application and quantity per acre, we must again fall back on the experience of England. There it has been mixed with the usual ight manures: ashes, plaster, charcoal, muck, &c., and used in quantities from one hundred and fifty pounds the acre, to four hundred: in one case, we think as much as six hundred were put on. Our impression is, that it is as well to apply it alone, for two reasons; one that you then know to what to attribute the condition of your crop; the other, that being an extremely sensitive article, it is impossible to tell how far it may have been effected by its companion. Changes and decompositions may be produced that might alter its whole character, and the guano be made to bear the whole blame of a failure, that was due rather to its associates. We would prefer to throw it on the ground in the spring, and let it be ploughed in at the rate of two to three hundred pounds of the Peruvian, and of three to four hundred of the African. One absolute essential in its use is, that the ground be moist. It will have no effect, or but a bad one, if employed in dry weather, or on a dry surface. We must take advantage of a storm of rain, or exert our judgment in the anticipation of one. It is from this necessity of moisture, that arises its extreme importance on sandy soils—on stiff clays, it does not do so well.

If this material should find favour with our farmers, and a regular supply can be relied on, it will produce two good effects, the saving our barn-yard manure, and the keeping our fields free from weeds, except such as are kindly supplied by our benevolent but negligent neighbours. Even if guano were dearer than it now is, and it can now be put upon our lands at about the same expense as fifty bushels of lime to the acre—the saving of labour in the destruction of weeds, the satisfaction of seeing our fields cleared of this foreign vegetable population, and the keeping our tempers untried, will repay amply, even if there be no decided additions to the crop. Besides, we have very little doubt that the guano will be found very destructive to the insects that cut our corn to pieces, and to all which harass us in our grains, vegetables, or fruits; at least they must be more than usually thick skinned, to be able to bear the application of so irritating a substance.

In this imperfect way we have gone through this important subject; but with such scanty materials, how could we say any thing of much value to the practical farmer! He cannot go out of his way to make experiments; he can place no confidence in conjectures; he cannot afford to change the whole conduct of his life to adopt novelties, or act upon another's imperfect experience; and in the matter before us, where he has to deal with a thing that is literally the edge-tool of agriculture, it would be madness to run the hazard of losing an entire crop, before the art of managing the instrument had been ascertained and perfected.

A. L. Elwyn.

Philadelphia, March 30th, 1846.

---

## Consideration of Light.

It is highly probable that many of our readers will conclude the following article, which we take from Paxton's splendid *Magazine of Botany*, is too speculative and scientific for the Farmers' Cabinet. To speak frankly, the editor is more than half inclined to the same opinion; but having read it with considerable interest himself, he has no doubt many of his subscribers will do the same.—Ed.

It is probable that we may never attain to a knowledge of the precise nature of light, because we cannot determine *that* of its assured source—*the Sun*. Still there are many phenomena which lead to a shrewd conjecture of its elements, and to these we may safely refer.

There are three distinct series of phenomena, traceable to solar influence, to which we invite the attention of the inquiring cultivator; namely, 1st, those of attraction—2nd, those of temperature—and 3rd, those of colouration.

The principle of attraction is manifested in the position assumed by leaves under the several angles of sunlight at different hours of the day. Thus, in *Erythrina*, we see the leaflets brought into first the *horizontal*, and then the *upright* position, at about eight or nine o'clock of the forenoon, and thence to mid-day—declining in proportion as the sun advances to the west. *Attraction*, whatever be its medium, is demonstrative of electric agency; this, at all events, will not be disputed when it is attended with luminous appearances.

But then it may be contended, that the phenomena of magnetism and of chemical attraction do not generally, or of necessity, develope light. This is true, but as respects magnetism—which is induced by the electric current, and therefore dependent upon it; so much so, as all but to prove that electricity and magnetism are one in essence. And as to the latter, when chemical attraction takes place, as between acids and alkalies, the combining powers unite, and thus

neutralize each other. In conformity with these chemical phenomena, light may be considered as exerting an invisible attraction upon the points and foliage of vegetables, which induces the flow of the sap in an *upward* direction, and also the *lateral* courses of the fluids through the tissue of the cells, and that of the medullary processes, thus producing the laboration and concoction of the proper specific juices of each individual plant.

There must be a governing agent,—and therefore we repudiate that maudlin language which ascribes volition and choice to inanimate structures.

2. *Temperature*, its rise and fall, are discerned as measured by our very imperfect instruments. In nine cases of ten, temperature is only a result of excited chemical action, of which combustion is one form; but as referred to the sun, the manifestation of direct heat is generally ascribed to the red rays, while those of magnetism are found in the blue and violet. Still the entire solar, or *white* ray, diffuses heat and light, without communicating heat to the transparent medium through which it passes, unless that medium be susceptible of electro-chemical changes.

This leads us to the consideration of that substitute for glass which was announced some time since, under the title of Whitney's composition. It is now perhaps fortunate, that Drake's sheet-glass may soon be obtained at comparatively small cost; but still, the varnished canvass was a great acquisition, because the direct light of the full solar rays might thus be diffused throughout a house, or pit, communicating its softened, genial temperature, without danger of scalding by lenticular action. But the cloth decays, cracks, perishes; and not only so, it becomes patchy, discoloured, and offensive to the eye. What are the causes of these disagreeable concomitants, which threaten to deprive the forcing gardener of one of his best appliances?

It will be found, that if a frame of varnished linen, or calico, be kept in a dwelling, unexposed to the evaporation of the soil underneath, and to the action of moisture from above, the decay will rarely occur. Whereas, when employed as a horticultural covering, it will speedily become blotched or stained all over with fungus, lichen, or some such cryptogamous vegetation. Here then we perceive the agents of decay, and hence, if some ingenious person could incorporate *with* the varnish, or superpose *upon* it, when applied, a certain antidote, or repellant of the invader, the varnished screen might last for years, sound and in a decent condition. We have thought of creasote, and bichloride of mercury (corrosive sublimate,) both inimical to mouldiness; but it does not as yet appear how either of them could be satisfactorily applied, because the former, if blended with the bulk of varnish, might be so masked as to lose its protective qualities; and the sublimate, if merely laid over the varnish as a wash, would be carried away by rain from the upper surface, and by watery vapour from the under surface. Perhaps a thin varnish of caoutchouc (India rubber) dissolved in pale naphtha, would be found to act efficiently in every way.

We have said that the sun does not heat the glass through which it passes—and glass is an electric; but it does not heat the linen screen: hence, chemical action is induced, and strange to say, under these circumstances cryptogamous vegetation preys upon the tissue: we have much to learn in circumstances of every-day occurrence.

The late president, Mr. Knight, was exceedingly curious in his endeavours to discover the causes of particular phenomena. He thought that *gravitation* had a very important influence on the growth of plants; and Professor Davy, with whom he was intimate, recounts one of Mr. Knight's experiments, which led him to presume that they owe the peculiar direction of their roots and branches entirely to this force. We refer to Davy's Second Agricultural Lecture for the following particulars:

Mr. Knight "fixed some seeds of the garden-bean on the circumference of a wheel, which in one instance was placed vertically, and in the other horizontally, and made to revolve by means of another wheel worked by water, in such a manner, that the number of the revolutions could be regulated; the beans were supplied with moisture, and were placed under circumstances favourable to germination. The beans all grew, notwithstanding the violence of the revolution, which was sometimes as much as 250 revolutions a minute on the vertical wheel—which always revolved rapidly—and with little variation of velocity; the radicles, or roots, pointed precisely in the direction of *radii* in whatever direction they were placed. The germs took precisely the opposite direction, and pointed to the centre of the wheel, where they soon met each other. Upon the horizontal wheel the conflicting operation of gravitation and centrifugal force, occasioned the germs to form a cone more or less obtuse, according to the velocity of the wheel, the radicles always taking a course diametrically opposite to that taken by the germs,

and, consequently, pointing as much below as the germs pointed above the plane of the wheel's motion."

Mr. Knight, by this ingenious experiment, failed to prove the agency of gravitation, for, to say nothing of the effects of mere mechanical force upon the germinating beans, by a velocity so great, he overlooked the presence of excited electricity. The attempt, at best, was very artificial, and would tend to no natural conclusions; but as to *gravitation* in the abstract, what is it? and what does the term express? A body gravitates when it falls to the earth; but when we consider that the earth is a globe, and that all bodies above its surface fall towards that surface, and therefore at every angle converging towards a central point which the globular figure admits of, it becomes plain that the act which we call descent, or falling, must be produced by attraction; and thus we are inevitably led to the exciting cause, the *light of the sun*, which by its beams electrifies or magnetizes all the revolving worlds belonging to its system, and renders them mutually co-attractive.

Thus, also, we interpret the phenomena of vegetable developements, as the direct solar light appears to effect the induction of those electrical currents which regulate the flow of the sap, the laboration of the proper juice and compound secretions, and the separation and fixation of the colouring principle.

Colour is the ornamental dress of the vegetable kingdom. Whence is it derived—what its source? We know that in the dark some plants acquire rich and deep tints: thus, the red giant Rhubarb, if placed in a warmish, close cellar, developes leaves, the stalks being of a most brilliant crimson, while the plate is of a rich lemon-colour. In the light, growing naturally, the stalk would be a dark ochreous red, and the leaf-plate a full green. Light, therefore, influences, by inducing chemical action in peculiar juices.

The solar ray is decomposable into four defined colours, and into three degrees of blue. By combination, these tints may be rendered productive of every shade of colour. It becomes, therefore, an inquiry of lively interest whether each ray fixes or deposits its own simple tints, or whether it acts electro-chemically upon certain fluids, which are destined to be the colouring media. In the absence of proof, we may still appeal to a few facts adduced by several authorities.

*Influence upon leaves—developing Chlorophyll.*—It frequently happens in America that clouds and rain obscure the atmosphere for several days together, and that, during this time, buds of entire forests expand themselves into leaves. "These leaves assume a pallid hue till the sun appears, when, within the short period of six hours of a clear sky and bright sun, their colour is changed to a beautiful green."

In Silliman's Journal a circumstance of this kind is recorded, whereby it appears that in six hours the tinting of several miles of a forest went through all the grades, from that of a greenish-white to full spring verdure.

Every gardener is conversant with the variations of colour which flowers assume under artificial treatment: thus, *Andrómeda polifolia*, and *Kalmia latifolia*, are purple or pink when growing in the open air, but become nearly white when made to flower under glass. Now, it is not the heat altogether that influences the flower, but light, modified by passing through glass. Hence, we should study the effects of all those degrees of heat in which any tender or half-hardy plant *can* thrive, and adapt them to the actual volume of clear sunlight, because a heated atmosphere is not a substitute,—or, at least, a very defective one—for the clear ray, inasmuch as it (heat) produces no chemical effect upon the fluids of either leaf or flower.

Light acts beneficially upon the upper surface of the leaves, and hence great caution is indicated in allowing space sufficient for full play and action; it also promotes the transpiration of superfluous moisture and gases; and these appear to transude chiefly through the stomates of the under surfaces.

We begin to acquire fresh evidence of electric action in the new experiments upon corn-growing when exposed to the agency of electric circuits. All nature, air, water, earth, are replete with masked light, and this can be derived only from the sun: if then it become a well established fact, that the growth of plants can be doubly stimulated by electricity derived from the atmosphere, we establish that most important point—the electrizing principle of the sun's rays. In a few months we hope to collect, and be enabled to adduce, facts in proof of the theory thus cursorily hinted at.

---

For the Farmers' Cabinet.

## Philadelphia Agricultural Society—Its Premiums.

Your correspondent, I. U., in your last No., who doubtless means to give wholesome advice to the Philadelphia Agricultural Society, has ventured some assertions and statements which should not pass unnoticed. He is not singular in the opinion that the

Society devotes a large portion of its premiums to what "it is *pleased* to term the improved breed of cattle;" and without affirming or denying that these are the Durhams "par excellence," let us for a moment turn to the facts of the case, and see whether they have overstepped the limits of prudence, and bestowed more attention on improved breeds than they merit. Had Mr. I. U. examined with attention the long lists of premiums which the Society annually presents to the public, he would have found that it offers premiums for other improved breeds to a far greater extent, in proportion to their numbers, than for Durhams, and also makes liberal provision for native stock. If your correspondent had been an attentive observer of their proceedings, he would have seen that almost every animal of the cow kind, other than Durham, that was not an absolute scrub, has been awarded a premium, while the great number of Durhams on the ground create active competition, and exclude many fine animals from obtaining premiums. I would ask why are not more native cattle exhibited? the Society would gladly distribute rewards for all that merit them. But the answer is obvious—our farmers have too much self-respect and sense of propriety to exhibit such *native* animals as grace their barn yards! And have the exertions of the Philadelphia Agricultural Society been of no avail in improving the breeds of cattle? A few years since the only handsome stock known here, were a few remains of Col. Powel's importation and the cattle driven from New England. Now, maugre the assertion of Mr. U., there are many dairies in the vicinity of Philadelphia, largely intermixed with Durhams and other improved breeds, of which allow me the liberty of naming:—Henry Chorley, Samuel Rogers, William Warner Roberts, George Martin, R. T. Potts, William Robinson, Garret Williamson, and George W. Blight, besides the more extensive breeders, Dennis Kelly, I. W. Roberts, and James Gowen. Several of these gentlemen have large milk and butter dairies, and they prefer the improved stock, not only because their yield is greater, but also because they mature earlier, and are far more valuable when turned off to the butcher.

These gentlemen, and many others who take an interest in the Society, are so thoroughly convinced of the advantage of good stock, that they raise their own to a considerable extent; but I apprehend few of them even dream of training up a *mountain runt* to usefulness and profit, in this latitude.

What has been the yield of Mr. Gowen's young stock as milkers, I am not particularly informed; but I do know that the general result of his dairy is encouraging, and the unkind fling at his readiness to "inform the agricultural community," might well have been spared. Would that farmers generally possessed a tithe of his readiness to impart information to their co-labourers! Mr. Chorley and others known to the writer, have been entirely successful in raising Durhams for the pail and the shambles. Can this be said of an individual among the thousands who depasture their fields with "native animals of unimproved breeds?"

That this and most other societies fail to interest and excite the farmers to active and ambitious zeal, is a melancholy fact; a farmer myself, and brought up among them, I can speak with freedom of their failings. It is no easy matter to conquer their apathy and indifference,—I had almost said selfishness; yet this Society, by the well directed energy and perseverance of a few, has accomplished much, and I hope will continue its laudable exertions. Repeated efforts have been used to induce the exhibition of agricultural implements and the productions of the soil. More discretionary premiums have been awarded to these, than to any other branches of the exhibitions, and a general disposition is and has been evinced to increase the display of both implements and the produce of farms.

Having dealt thus freely with your correspondent's advice, let me give him and his brother farmers a little in return—"Take the plough by the handle," that is, become members of the Society; attend its meetings, and lend a helping hand to "make all its furrows clean:"—I confidently engage that every worthy tiller of the soil will be welcomed within its walls.

A. S. R.

Philadelphia, March 26th, 1846.

Yes—we would say, take the plough by the handle—join the Society, and if its movements are not the best they might be, lend a helping hand to put them so:—if too large a proportion of its premiums are devoted to one branch of the farming interest, have the matter rectified. If the Society places too high a value upon Durhams, or upon any other breed of cattle, we would say to I. U., and others, produce your *natives*, and let them speak for themselves on the ground, or through the still more irresistible evidences of the *pail*. Facts are like straight lines, they sometimes lead where you do not wish to go. It would require no small amount of *hard* writing to prove that the introduction of Durham and other improved breeds, has not vastly benefited the country.—Ed.

---

When things tire you at the head, take them by the tail.

### To make Fruit Trees Thrifty.

In the month of March, wash them as high as a man can reach with one quart whale oil soap, diluted in fifteen gallons of water; and if in April there are caterpillars, give them another dose; then put round the roots of the apple and pear trees, two or three shovels of charcoal or anthracite ashes; to the peach, plum and nectarine trees, I have tried various experiments, yet have hitherto been most pleased with tobacco stems, which are purchased at two cents per bushel. Half a peck of stems around each tree is sufficient. The roots are first laid bare; the tobacco is then placed over them and covered with soil. To this three or four shovels full of anthracite ashes may be added with advantage. The past spring I have tried on all, save peach and nectarine trees—which were so diseased with worms that I ordered them cut up—an application of warm (not hot) coal tar from the gas house. We first removed the earth from the roots, picked out the worms, and then, with a painter's brush, covered the trunk of the tree eight inches up from the roots. After this the soil was immediately replaced around the tree. The effect was astonishing. In May we applied half a pint of guano as a top-dressing to each tree, and thriftier trees, fuller of fruit, and with a deeper, richer, green foliage, cannot be seen. I mean to treat all my peaches this way, as the cheapest and best manner of protecting them. Two peach trees I gave up last fall as past hope of saving. On these I tried an experiment of putting to each fifteen gallons of urine, neutralized with a peck of plaster of Paris. The trees are now living, and the leaves are green; but whether they will thrive well remains to be seen. I think, however, the dose will effect a cure; and if so, it is worth knowing.

R. L. Colt.

Patterson, N. J., June 5th, 1845.

---

For the Farmers' Cabinet.

### Mildew or Blight in the Grape.

Mr. Editor,—In your February No. I notice a communication on the above subject, signed "T.," and among your editorial remarks you say you would be glad if the author of that communication, or some one else, would give more extended information in the premises. In the hope that your very reasonable request would be attended to, so that you might publish the information in your succeeding No., I refrained from giving you my views on the subject. Such information, however, was not published, and probably not furnished, and therefore I feel called upon to give a few of my own ideas, which may perhaps be of some service.

The blight or mildew, is the operation of fungi, and the cause of the fungi is a surplus of carbonic acid gas; which carbonic acid gas would not exist as such, were there a sufficient supply of potash.

The grape-vine needs a large quantity of potash. Dr. Lee, a scientific gentleman of New York, says, that "a sugar maple, a *grape-vine*, an apple-tree, and a potatoe plant, need a soil that *abounds in potash*." In the appendix of Dr. Liebig's great work on Agricultural Chemistry, second American edition, by J. W. Webster, you will find that while speaking of the mode of manuring grape-vines, they say, "Under ordinary circumstances, a manure containing *potash* must be used, otherwise the fertility of a soil will decrease. This is done in all wine countries." Again, they say, "One thousand parts of the pruned branches contain fifty-six to sixty parts of carbonate, or *thirty-eight to forty parts of pure potash*."

We may now easily account for the fact mentioned by your correspondent, that "old vines are much more subject to mildew than young." They have exhausted the potash from the soil, and when their leaves absorb carbonic acid, the plant has no potash with which to form a healthy salt by union with it; and the diseased plant invites the fungi. A humid summer is favourable for the generation of carbonic acid, and hence the reason why "T." found his young vines attacked during such a season. "T." is correct when he says "the soap-suds is always beneficial, and can be used freely." The reason is, soap-suds contain potash. I should recommend very strongly the use of wood-ashes about grape-vines, particularly in "cold graperies," where the vital power of the plant is not so strong, and consequently it has not the ability to expel the cause of the disease.

Yours, &c., Chemico.

Wilkesbarre, March 26th, 1846.

---

The cultivation of the grape vine for the making of wine, has received great attention for some years past in the neighbourhood of Cincinnati, and many new vineyards are yearly formed for that purpose, as it is found to yield a handsome profit for the investment. We expect in a few years to see the cultivation of the grape under glass extensively carried on, as we have no doubt our fine climate and clear sunny weather in the months of February and March, will prove highly favourable to that object.—*Magazine of Horticulture.*

### Forsyth's Composition.

The name of Forsyth is so well known to fruit growers, and his composition, his pruning, training, and mode of renovating fruit trees, so frequently referred to, without much knowledge of their merit, that it may be gratifying to our readers to know something more of the man; and also useful to be made acquainted with the leading features of his practice.

Forsyth was a Scotchman, employed for several years by Miller, in the Chelsea Botanic Garden, whom he ultimately succeeded as curator. This situation he held about fourteen years, and was then chosen to superintend the Royal Gardens of Kensington and St. James's. Whilst so engaged he received a pecuniary grant from Parliament, for his improved mode of renovating fruit trees, by the excision of diseased parts, heading down weak and decrepit trees, and the application of his composition to all wounds thereby occasioned. Much of Forsyth's practice has been approved by his successors; and every one that is interested in the growth of fruit should be acquainted with his composition, the preparation of which, for several years, was not disclosed to the public. This composition may truly be said to have been, at the time it was made known, as much esteemed for curing the cuts and bruises of maimed trees, as Marshall's Cerate ever was for its healing virtues on the human body. It having been considered by the Commissioners of the Land Revenue, that Forsyth's composition could be advantageously applied to broken trees in the Royal Forests, a representation to that effect was made to the House of Commons, and twelve gentlemen, headed by the Marquis of Abercorn, were appointed as commissioners to make inquiry whether the composition in question was efficacious for the purpose of restoring the bark to injured oak trees; and preventing or curing injuries and defects in timber, arising from the cutting or breaking off of limbs or branches. Forsyth had, for several years, employed it in the Royal Gardens at Kensington, where its effects were shown to the commissioners; this proved satisfactory; and a recompense was granted by Parliament to Forsyth, for making known the preparation and mode of application of his celebrated composition. The document which unfolded Forsyth's secret was dated from Kensington Gardens, May 11th, 1791; and having been esteemed of so much importance, we give it verbatim, as follows:

"Take one bushel of fresh cow-dung, half a bushel of lime-rubbish of old buildings—that from the ceilings of rooms is preferable—half a bushel of wood ashes, and a sixteenth part of a bushel of pit or river sand; the three last articles are to be sifted fine before they are mixed; then work them well together with a spade, and afterwards with a wooden beater, until the stuff is very smooth, like fine plaster used for the ceilings of rooms.

"The Composition being thus made, care must be taken to prepare the tree properly for its application, by cutting away all the dead, decayed, and injured part, till you come to the fresh sound wood, leaving the surface of the wood very smooth, and rounding off the edges of the bark with a drawknife, or other instrument, perfectly smooth, which must be particularly attended to; then lay on the plaster about one-eighth of an inch thick, all over the part where the wood or bark has been so cut away, finishing off the edges as thin as possible: then take a quantity of powder of dry wood ashes, mixed with a sixth part of the same quantity of the ashes of burnt bones; put it into a tin box, with holes in the top, and shake the powder on the surface of the plaster, till the whole is covered over with it, letting it remain for half an hour, to absorb the moisture; then apply more powder, rubbing it on gently with the hand, and repeating the application of the powder, till the whole plaster becomes a dry smooth surface.

"All trees cut down near the ground should have the surface made quite smooth, rounding it off in a small degree, as before mentioned; and the dry powder directed to be used afterwards should have an equal quantity of powder of alabaster mixed with it, in order the better to resist the dripping of trees and heavy rains.

"If any of the Composition be left for a future occasion, it should be kept in a tub, or other vessel, and urine of any kind poured on it, so as to cover the surface; otherwise the atmosphere will greatly hurt the efficacy of the application."—*Maund's Botanic Garden.*

---

### Api Petit; or American Lady Apple.

Of all the apples that grace the dessert, this is confessedly the most beautiful; and its tiny dimensions rather increase than diminish its attractions. It is not its glossy brilliant crimson alone that induces the eye to rest on it with pleasure, but it is the melting of this into ivory tints—sometimes as gradual as daybreak—sometimes with brighter abruptness, just as the ruddy cloud bounds the softened light of the setting sun. Residents of London, during the last winter,

could but be struck with the appearance of this brilliant fruit decorating the windows of the metropolitan fruiters. In productive seasons, like the last, it has been extensively imported into England from America, although it is probable that England knew the Lady Apple before it knew America—before Columbus had looked on the waters of the Orinoco. It is, doubtless, of very ancient origin, and is said to have been introduced to France from the Peloponnesus. This may possibly be the original apple referred to in French dictionaries under the name Api, and described as a small delicate apple, white and red. It also bears the name Api rouge, and Etoilée.

In flavour the Lady Apple is less remarkable than for beauty. It is sufficiently sweet, with very little acid; pleasant, but devoid of any peculiar aroma. It keeps well till April; but it is desirable that it should hang as long on the tree as the season will permit.—*Maund's Fruitist.*

---

Silk in Turkey.—The original manufactories of silk were established before the conquest of Constantinople, at Broussa, from whence most of the raw silk is still obtained, the abundance of mulberry trees in its neighbourhood being favourable to the nurture of the silk-worm. Little Broussa silk is however now sold in the silk bazaar of Constantinople. Within the last ten or fifteen years since the several treaties made with the Sublime Porte, the home silk trade has diminished fifty per cent. A large supply of imitation goods is received from England, France and Italy, and the richer articles, principally manufactured at Lyons, have completely superceded those formerly received from Broussa, or manufactured at Scoutari and Constantinople.—*White's Three Years in Constantinople.*

---

How to Lay Planks on Bridges.—The common mode of planking, placing the planks across the travelled way, is liable to great objections. The planks will not last so long, they make a very rough way when partly worn, and when their central parts are worn thin the planks must all be taken up and new ones supplied.

Lay your planks lengthwise, in the line of travel, and the horses' shoes will not cut them out half so fast as when you lay them crosswise; the way will continue comparatively smooth as long as the planks last; and when those that are most travelled on are worn thin, they may be replaced without meddling with the side planks that are not half so much worn, and that may last as long as the new ones where the principal travel is.—*Mass. Ploughman.*

---

## Fine Crops of Corn.

The following extract is made from a letter received from Ebenezer J. Dickey, of Hopewell Cotton Works, Chester county, Pa., dated Feb. 21st. The farmer who is accustomed to poor or indifferent crops, can hardly conceive the difference there is between his, and those which may be called good ones. If by chance he happens to get a large crop of hay or corn, his mow, or his crib, fills up so fast that he hardly understands it, and he finds his heart palpitating with a kind of undefined satisfaction, and it may be with gratitude, for the success of his management. Twenty-nine hundred and fifty-nine bushels of corn thrown into a man's crib, from thirty-nine and a quarter of his acres, are very well calculated to give him a good opinion of his farming, or his land, or both: and it gives us no trifling pleasure to record the fact.—Ed.

I planted three fields in corn last season, the first containing twelve acres, off of which I took last fall ten hundred and seventy-three bushels; the second contained fourteen acres and three-quarters—on this field I had one thousand and forty-three bushels; and on the third, of twelve acres and a half, I had eight hundred and forty-three bushels. About two-thirds of the first field were manured last spring on the sod and ploughed down; and the other third and the other two fields had no manure. This does not come up to the premium crops that we have accounts of, but when we consider the number of acres that were planted, I think it was a pretty fair crop.

Yours respectfully,

Ebenezer J. Dickey.

---

Keeping Cows in Winter.—Farmers prejudice very greatly their own interest in suffering their milch cows to come out in the spring in low condition. During the time they are dry, they think it enough to give them the coarsest fodder, and that in limited quantities; this, too, at a time of pregnancy, when they require the kindest treatment and the most nourishing food. The calf itself, under this treatment of the cow, is small and feeble. He finds comparatively insufficient support from his exhausted dam; and the return which the cow makes in milk during the summer, is much less than it would be, if she came into the spring in good health and flesh. It requires the whole summer to recover what she has lost. The animal constitution cannot be trifled with in this way.—*Colman.*

## To Make Pear Trees Fruitful.

As we proceed with the Fruitist, the subjects of which it is destined to treat, branch out and exhibit more and more the importance of increased attention on the part of the fruit grower. Although it may be but a single tree that he has to manage, even this, in proportion to his knowledge and attention, will be made matter of pleasure and profit. The following paper, submitted to the Horticultural Society by its late president, T. A. Knight, Esq., indicates principles, of the advantages of which the cultivator may avail himself in other ways than those to which they are applied in the experiments detailed.

"The pear-tree exercises the patience of the planter during a longer period before it affords fruit, than any other grafted tree which finds a place in our gardens; and though it is subsequently very long-lived, it generally, when trained to a wall, becomes in a few years unproductive of fruit, except at the extremities of its lateral branches. Both these defects are, however, I have good reason to believe, the result of improper management; for I have lately succeeded most perfectly in rendering my old trees very productive in every part; and my young trees have almost always afforded fruit the second year after being grafted; and none have remained barren beyond the third year.

"In detailing the mode of pruning and culture I have adopted, I shall probably more easily render myself intelligible, by describing accurately the management of a single tree each.

"An old St. Germain pear-tree, of the spurious kind, had been trained in the fan form, against a north-west wall in my garden, and the central branches, as usually happens in old trees thus trained, had long reached the top of the wall, and had become wholly unproductive. The other branches afforded but very little fruit, and that never acquiring maturity, was consequently of no value; so that it was necessary to change the variety, as well as to render the tree productive.

"To attain these purposes, every branch which did not want at least twenty degrees of being perpendicular, was taken out at its base; and the spurs upon every other branch, which I intended to retain, were taken off closely with the saw and chisel. Into these branches, at their subdivisions, grafts were inserted at different distances from the root, and some so near the extremities of the branches, that the tree extended as widely in the autumn, after it was grafted, as it did in the preceding year. The grafts were also so disposed, that every part of the space the tree previously covered, was equally well supplied with young wood.

"As soon in the succeeding summer as the young shoots had attained sufficient length, they were trained almost perpendicularly downwards, between the larger branches and the wall, to which they were nailed. The most perpendicular remaining branch upon each side, was grafted about four feet below the top of the wall, which is twelve feet high; and the young shoots which the grafts upon these afforded, were trained inwards, and bent down to occupy the space from which the old central branches had been taken away; and therefore very little vacant space anywhere remained in the end of the first autumn. A few blossoms, but not any fruit, were produced by several of the grafts in the succeeding spring; but in the following year, and subsequently, I have had abundant crops, equally dispersed over every part of the tree; and I have scarcely ever seen such an exuberance of blossom as this tree presents in the present spring. Grafts of eight different kinds of pears had been inserted, and all afforded fruit, and almost in equal abundance. By this mode of training, the bearing branches being small and short, may be changed every three or four years, till the tree is a century old, without the loss of a single crop; and the central part, which is unproductive in every other mode of training, becomes the most fruitful. I proceed to the management of young trees.

"A young pear stock, which had two lateral branches upon each side, and was about six feet high, was planted against a wall early in the spring; and it was grafted in each of its lateral branches, two of which sprang out of the stem about four feet from the ground, and the others at its summit, in the following year. The shoots these grafts produced, when about a foot long, were trained downwards, as in the preceding experiment, the undermost nearly perpendicularly, and the uppermost just below the horizontal line, placing them at such distances, that the leaves of one shoot did not at all shade those of another. In the next year the same mode of training was continued, and in the following I obtained an abundant crop of fruit, and the tree is again heavily loaded with blossoms.

"This mode of training was first applied to the Aston-town pear, which rarely produces fruit till six or seven years after the trees have been grafted; and from this va-

riety and the Colmar, I have not obtained fruit till the grafts have been three years old.

"In the future treatment of my young pear-trees, it is my intention to give them very nearly the form of the old tree I have described, in every respect, except that these will necessarily stand upon larger stems, which I think advantageous; and I shall not permit the existence of so great a number of large lateral branches. In both cases the bearing wood will depend wholly beneath the large branches which feed it; for it is the influence of gravitation upon the sap which occasions the early and exuberant produce of fruit.

"I scarcely need add, that where, in old trees, it is not meant to change the variety, nothing more will be necessary than to take off wholly the spurs and supernumerary large branches, leaving every blossom which grows near the end of the remaining branches, or that the length of the dependent bearing wood must be different in different varieties. The Crassane, the Colmar, and Aston-town, will require the greatest, and the St. Germain probably the least length."
—*Maund's Botanic Garden.*

---

### Transplantation of Trees.

There is a degree of misconception on this subject that is truly astonishing, when the exercise of a moderate portion of common sense is all that is requisite to form a correct judgment. In the first place, all trees, and even the most delicate plants of the temperate zone, can be sent from our country to Europe with perfect safety, and even to cities in the interior, such as Warsaw, Vienna, &c., to which there are several hundred miles of land carriage after arrival in Europe, and yet there are frequent inquiries made, whether trees and plants will bear transportation to the different States of our Union. All that any applicant for trees, &c., has to do, is to inform the nursery proprietor the best route for transmission, and what portion is land carriage, and he will manage the details accordingly. Many persons, residing in States south of us, have also very erroneous notions as to the suitable seasons for transmitting trees and plants to them. The months of January and February are perfectly safe for forwarding trees and shrubbery as far south as Charleston, and November to January, to New Orleans. The period for transplantation commences here the 1st of October, and extends to the 1st of May, for the different sections of our country. Trees do not advance materially in vegetation here until the middle of April, and it matters not how far advanced they may be at the places where they are planted, even if it were mid-summer, provided they are sent from a place where vegetation is dormant, and the voyage not so long as to start their growth on the passage. Grape vines being very late in vegetating, may be safely transported a month later than the period named for trees. Roses are very retentive of life, and may be transported in safety during the whole period that they are in a dormant state; and potted plants may be transported in the pots, or turned out and well mossed around the roots, at all seasons of the year. Greenhouse plants can be sent safely throughout the year. Dahlias, bulbous roots, and herbaceous plants, from October to May, inclusive.—*Magazine of Horticulture.*

---

From the American Agriculturist.

### An Orange County Milk Farm.

While on a visit at Newburgh last summer, I made the acquaintance of Mr. J. R. Colwell, who lives on a farm of 280 acres, two and a half miles from the river, and upon which he keeps fifty cows, four oxen, five horses, and varying numbers of young stock. About 60 acres are in grain cultivation; the other in pasture, mowing, and woodland, which latter, however, is pastured. The average crops on this, as well as adjoinining farms, may be fairly stated as follows:—Corn, 40 bushels to the acre; rye, 20; oats, 40; and hay, one and a half tons. Of course the great reliance for profit is upon the milk sent to the city market. This is sold at an average through the year of two cents per quart, delivered on board of steam-boats at Newburgh. Mr. Colwell expects his cows to average five or six quarts of milk per day through the year, which will be in a year, at five and a half quarts per day, 2,007½ quarts, at two cents, $40 15, which is a little below what is generally calculated for the average produce of cows in Orange county.

Last year Mr. Colwell only kept sixteen cows, from which he sold milk to the amount of $890, making an average of $55 62½ to each cow; a very pretty little item for some of us out West, who brag of our great prairie pastures, to set down opposite our account of profit, where cow-keeping costs nothing, and the profit is in exact proportion.

But I must tell how Mr. Colwell's cows are kept. In summer, upon good pasture, watered by such springs and rills as are always found trickling through a mountain-

ous country such as this is. At six o'clock, regularly through the summer, they are brought from the pasture to the yards, and milked, and then turned out in a different pasture during the night. This change of pasture every night, Mr. Colwell looks upon as an item of great importance. When the pasture begins to fail, say 1st of October, he commences feeding half a bushel per head per day, of brewer's grains, which are hauled each day from Newburgh, and fed to the cows in heaps laid upon the clean sod. The winter feeding commences on an average the middle of November, and ends about the 10th of May. The cows are all stabled through the winter, and at present turned out to water; but Mr. Colwell intends to fix his stable so as to water them as they stand in the stalls. For winter feed, everything of straw, hay, or stubble kind, is cut up, and corn and cobs, and occasionally oats ground, and two quarts of this meal, with three pecks of brewers' grains to each cow, are mixed up with the chopped straw, &c., twelve hours before feeding, and given in quantities to satisfy each appetite—not forgetting a daily allowance of salt. This feed, and a warm stable, give him almost as much milk in winter as in summer. When I was there in October last, the price of grains was four cents per bushel, and I think I understood Mr. Colwell, that was his contract price through the year. If you will add the present prices of hay and grain, it will be interesting to some of us "outside barbarians," and enable us to "calculate" the cost of milk. Mr. Colwell could give you many other items worth your notice, I dare say, and I engage you a most hearty welcome, if you will give him a call.

*Quantity of grass seed sown to the acre.*—In my own neighbourhood, and many other places in which I am acquainted, four quarts to the acre of timothy seed are thought to be a good seeding; and I am laughed at for talking about putting on half a bushel. If such men ever read, I should like to have them learn how they seed land in Orange county. Noticing while on a visit to Mr. Charles Downing last fall, that he was seeding down a piece of ground—dry gravelly loam upon a side hill, I had the curiosity to see how much seed he put on to the acre, and found it was half a bushel of clean timothy, one-fourth of a bushel of orchard grass, and one-eighth of a bushel of clover. Now, *if* four quarts are enough, what a waste of seed is here? And equally wasteful was he in the labour bestowed upon the land. Not contented with ploughing and throwing on the seed in a windy day, he actually sowed it carefully even, and then harrowed the ground until smooth. And what is more, picked up the roots, stones, and trash, besides the waste of putting on manure.

"Well, no wonder such folks can make $55 from a cow in one season—we can't do do it out West, that is a fact, stranger; but then we can *live* without it."

That is the answer—"*we can live*"—yes, we can and do live, but who knows how; you never will till you come and see. "One half the world don't know how the other half live." No; if they did, they would try to live better. If some of "your folks" "down East," only knew how some of "our folks" "out West," lived, or pretended to live by farming, they would be more contented; and if Western land spoilers knew how Eastern land skinners had skinned their land to death, they would not go on doing just the same thing. But they won't know, and of course, won't do.

SOLON ROBINSON.

Lake Court House, Ind., Dec. 6th, 1845.

---

## Hoare's Mode of Planting the Vine.

A FEW months ago, Mr. Hoare, the well known writer on the Vine, published a new system of managing the roots of that plant, which if not applicable in its widest sense to many climbing plants, may be applied in a modified degree with a reasonable assurrance of success; and to the consideration of this, we would now direct attention.

Mr. Hoare's method for the Vine is to construct compartments for each plant of bricks cemented together, and with a flooring of the same material, so as to prevent the roots from penetrating beyond them. These are filled entirely with equal proportions, well mingled together, of broken bricks, charcoal, lumps of mortar and bones, the three former generally in fragments about the size of a hen's egg, and well soaked in liquid manure for some time previous to use. Smaller or larger pieces may also be added; this should be in some measure regulated by the size of the compartment; and it is necessary that the whole be very compactly placed together. When this work is accomplished, they are covered up with bricks as before set in cement, with the exception of a space where they are left loose for the insertion of the plant, and the administration of fluid.

The advantages claimed for this method, are, that it presents a continual source of food which is never in excess, or, at least, is so conditioned that the plants can rarely obtain an overabundant supply. The substances which afford it are always moist, but

never wet, a state which necessarily renders them a much *warmer medium* than ordinary earths; and whilst the roots of a plant are thus placed in a warmer temperature, they are also less liable to be affected by any occasional depression of the atmospheric temperature.

The extensive absorbent powers, and the capability of retaining moisture possessed by brick and charcoal, must be well known to every scientific cultivator. The same powers are also in a large degree common to old decayed mortar; hence when those materials have laid in urine, and are mixed together with a proportion of bones—which are in themselves a manure of the most lasting character,—a fund of nourishment is stored up which is almost exhaustless, and is represented to furnish means of nourishment and facilities for growth, beyond that which can be obtained from a much larger bulk of mere soil.

Although this method is expressly intended by Mr. Hoare for the management of the vine, we entertain little fear of the success of its application to many climbing plants with strong roots, which have hitherto been found very difficult to flower, or to restrain within moderate limits; but we apprehend it will be necessary to employ a larger number of smaller fragments than is recommended for the vine.

Perhaps, however, the utility of these substances may be greater and more general when used in conjunction with a small proportion of loose earth, wood-ashes, rotten wood, and leaves in a partial state of decomposition. And in this respect we can speak more advisedly, as our remarks are not merely speculative, but founded on past experience. In adopting it, the earth need not be mingled with the entire mass, but merely incorporated with the upper portion of it, to assist the plant in its earliest efforts to establish itself; for it is then that a portion of earth seems most essential, and it will through time by the continual ramification of roots, and occasional waterings, be carried in small quantities amongst the lower part of the mass. It is better, too, that it should be primarily employed only in the upper stratum, in order that a larger amount of the finer fibres may be encouraged in the vicinity of the surface.—*Paxton's Magazine of Botany.*

---

For the Farmers' Cabinet.

## A Suggestion.

Mr. Editor,—While the more intelligent part of our agriculturists are turning their attention to the use of guano as a fertilizer, and our merchants are sending their ships thousands of miles to the islands of the ocean, for that highly valuable substance, it appears to me that they should not overlook another article valuable for agricultural purposes—an article, too, that is, I am inclined to believe, more valuable than even the guano, for calcareous soils; and soils that have had sixty, eighty, an hundred, or an hundred and fifty bushels of lime per acre thrown upon them.

Our whalers, after they have obtained the oil from the blubber, throw what remains overboard: this refuse is composed almost entirely of carbon and nitrogen, and hence would be very valuable to grain raisers as a manure. It is an easy matter to pack this refuse away in casks, and I have every reason to think that if the farming population of our country would properly appreciate its value, it might be brought home by the whalers, and sold at a price that would largely increase the profits of a whaling voyage. There might probably be some expense attending the packing and preserving of it, such as the purchasing of salt—but this salt would render it still more useful, as it is also a fertilizer, and the increased value of the refuse would perhaps balance the cost of the salt; especially as salt for this purpose need not be of the best kind, and might be purchased very cheaply where salt is manufactured—say at Turk's Island, or somewhere else in the track of whale ships. The ashes made by the fires while trying out the oil—and I believe the whalers use hickory and oak wood principally, which produce good ashes for the purpose—might be thrown into the casks with the refuse, and would assist in preserving it, and be thereby turned to a good purpose.

This refuse cut into small pieces and scattered over a wheat field about the time the wheat is in blossom, would largely increase the crop; and if the soil was supplied with lime sufficient to make good strong stalks that would be able to hold up the heavy heads, the farmer, by the increased value of the crop, would be enabled to pay a good price per pound, for the refuse blubber. Will our grain growers and whaling companies look into this matter?

Chemico.

---

To Prevent the Smoking of a Lamp.—Soak the wick in strong vinegar, and dry it well before you use it: it will then burn sweet and pleasant, and give much satisfaction for the trifling trouble in preparing it. Lamp smoke is not only disagreeable to the smell, but hurtful to the lungs.

For the Farmers' Cabinet.

## James Gowen's System of Farming.

Mr. Editor,—In your last No. Mr. Gowen insinuates, if he does not directly make the charge, that maliciousness or mischievousness has been at the bottom of the observations I made on his letter to Gen. Richardson—as if he thought it treason against right, for one to differ from himself in opinion, or as if no one could so differ, and be honest. Other people, nevertheless, will venture to differ from him when they think proper, as will also your humble servant; and I beg leave even to suggest, that we may by possibility do so, and be as honest at heart, and as patriotic in purpose, as himself: and by your permission, Mr. Editor, I may sometimes take the liberty of expressing this difference of opinion in your paper, though with this communication I mean to leave the present subject. I am more accustomed to handling the plough than the pen, and like to confine myself to a plain statement of facts. I feel compelled to go over the whole ground, but I will be as brief and condensed as possible.

I have spoken of Gen. Richardson being led from the frying-pan into the fire, when advised to raise exclusively, his own stock of cattle, and of the Durham breed. I pointed out what I considered a better plan, in the following words: "If Mr. Gowen will step over to his neigbours, the intelligent farmers of Chester county, he will find what I have asserted; they carry out his plan in part, leaving three-fourths of the arable land in grass for four or five years." This shows that I agreed with Mr. Gowen, in his views as to the advantage of cultivating more grass than grain. And here I must also invite Gen. Richardson—who has brought the name of H. S. not so very advantageously from the South—if he should visit Pennsylvania again, to pass along among the Chester county farmers, when, it may be, he will not judge so severely of me. Mr. Gowen, who has only a few years ago stepped from his store on to his farm, will, I trust, admit that the Chester county farmers have more experience than himself, and their practice, I can assure him, is worthy his attention.

He has made a successful speculation with the Durham cattle; his *Dairy Maid*, has brought him *golden calves;* but it does not follow, that these have proved *golden* to their purchasers. So long as he can sell his young heifers and bulls at $100 or $150, it is indeed a good plan to raise cattle. But the Durham delusion, like all other delusions, will end. The old Maid, even will be neglected—the Durham breed will be worth no more than our good domestic Genesee cattle: but I need not repeat what I have said in my former communication on this subject. What will then be the situation of Mount Airy farm? A soil in its primitive state, naturally poor, requiring annually strong manuring and expensive manual labour, can hardly compete in raising cattle, which consume hay worth $18 a ton, and are pastured on land worth from $100 to $200 per acre, and those cattle be sold for little, or no more than Western cattle, raised on the fertile plains I have described, which have an inexhaustible alluvial soil, particularly adapted to raising cattle—requiring but little manuring—no manual labour but to make the hay, worth on the spot, $6 to $8 per ton—pastured on land richer than Mr. Gowen can make his land, and worth from $25 to $35 per acre. Now let me ask, does not the Chester county grazier act much more wisely to buy his stock from the Western drover, than to raise it himself?

Mr. Gowen in his last communication, complains that I have placed him in the category of those who abandon their cattle to straw and the winter winds. To quote his own language, "I never said such a thing." How could he have so understood me? Let any one read my paragraph commencing on the 225th page of your seventh No., and judge if I have so placed him—or whether this *category* be not merely one of his own conjuring up. On the contrary, I said his farm was in the highest state of cultivation; and so it is; but whether it affords a profit, is quite another question. What I said, was plainly in reference to those who purchase Durhams at high prices, expecting every thing from them, while, at the same time, by shameful neglect, they have reduced their domestic cattle to scrubs, which are a disgrace to themselves and their management.

Mr. Gowen further says, "If I make much or little by farming, that is my own affair." Certainly—it is highly impertinent to pry into any man's private matters: but Mr. Gowen presents his farm as a pattern; he comes before the public with an improved system; of course we all feel an interest, and have a right to submit that system to a close investigation, both as to the manner of operation, expenses, profits, &c.

Of Mr. Gowen's most singular account of the produce of his farm, given in your last No., page 254, all which he sets down as the result of his $1000 outlay for labour, I leave the reflecting readers of your Cabinet to judge. He sets down $2160 as the value

of his hay. Of one hundred and twenty tons, how much hay will be left to send to market to sell for cash, after having wintered seven horses and fifty head of cattle? To produce the extraordinary quantity of milk and butter that will realize $1400, how many of his roots will it be necessary to give to his cows? and how many will be left for sale, after they are satisfied? yet they are all set down as profit! Twenty head of swine cannot be kept from squealing on homœopathic doses, and fifteen hogs weighing 4,500 lbs. cannot be fattened as Mr. Gowen fattens his stock, altogether on corn-cobs. Yet $600 are set down as value for 1000 bushels of corn, and full price added for the pork afterward. Up here, Mr. Editor, in this rough country, where we have but a rough plan of book-keeping, we should call this a system of *double entry*. Mr. Gowen's horses receive neither corn nor oats, but are fed on ship-stuff and cut timothy hay. Now suppose the ship-stuff that is bought, should cost more than the corn brings, that is sold, I give it to some of your juvenile readers to cypher out the amount of profit. By the way, I am a miller; and I know that in a well regulated mill, very little farinaceous matter is left in ship-stuff, and consequently it can contain but little nutriment. It would be an important discovery, if hard-working farm-horses can be kept in proper order on ship-stuff.

Now I dismiss the subject,—spring is at hand, and I have to attend to my farm.

H. S.

Bethel, Berks co., Pa., March 28th, 1846.

---

For the Farmers' Cabinet.

## Preparation of Seed Wheat.

Mr. Editor,—I have noticed several communications in your valuable paper, upon the preparation of seed wheat; as they all differ some what from the method I have adopted for the last three years with much success, I beg leave to give you my mode of preparation.

I place a half hogshead nearly full of water in my barn—add glauber salts until the water ceases to dissolve them; then take a half bushel of wheat in a bale basket, sink it gradually, stirring it with a paddle until every particle of filth is washed out, which will float on the brine; raise the basket suddenly to throw off the filth, let the brine drain from it, place the wheat on the floor and roll it in newly slacked lime, then run it aside to let it dry a few hours before seeding—skim the floating filth from the brine and strain it through a colander or fine sieve. By this mode one hand can wash as fast as ten ploughs can put it in.

In 1843, I received 100 bushels of seed wheat from the Western shore; after seeding more than one half I discovered smut in it, and prepared 30 bushels as stated, washing out a quantity of smut and other filth. In 1844 I found the smut much increased in the wheat not prepared; in that prepared, after a careful examination, I found only one smut head; I then examined the grain, and thought I could see a perceptible difference in favour of the prepared wheat.

In the fall I seeded 75 bushels of that wheat, washing only 12 bushels. In 1845 I examined carefully the 12 bushels seeding, and found no smut; I did not examine that not prepared, but found none in cleansing it for market. I again compared the grain, and oberved if any thing, a greater difference in favour of the prepared wheat. I also discovered a like difference in a white wheat that I was seeding.

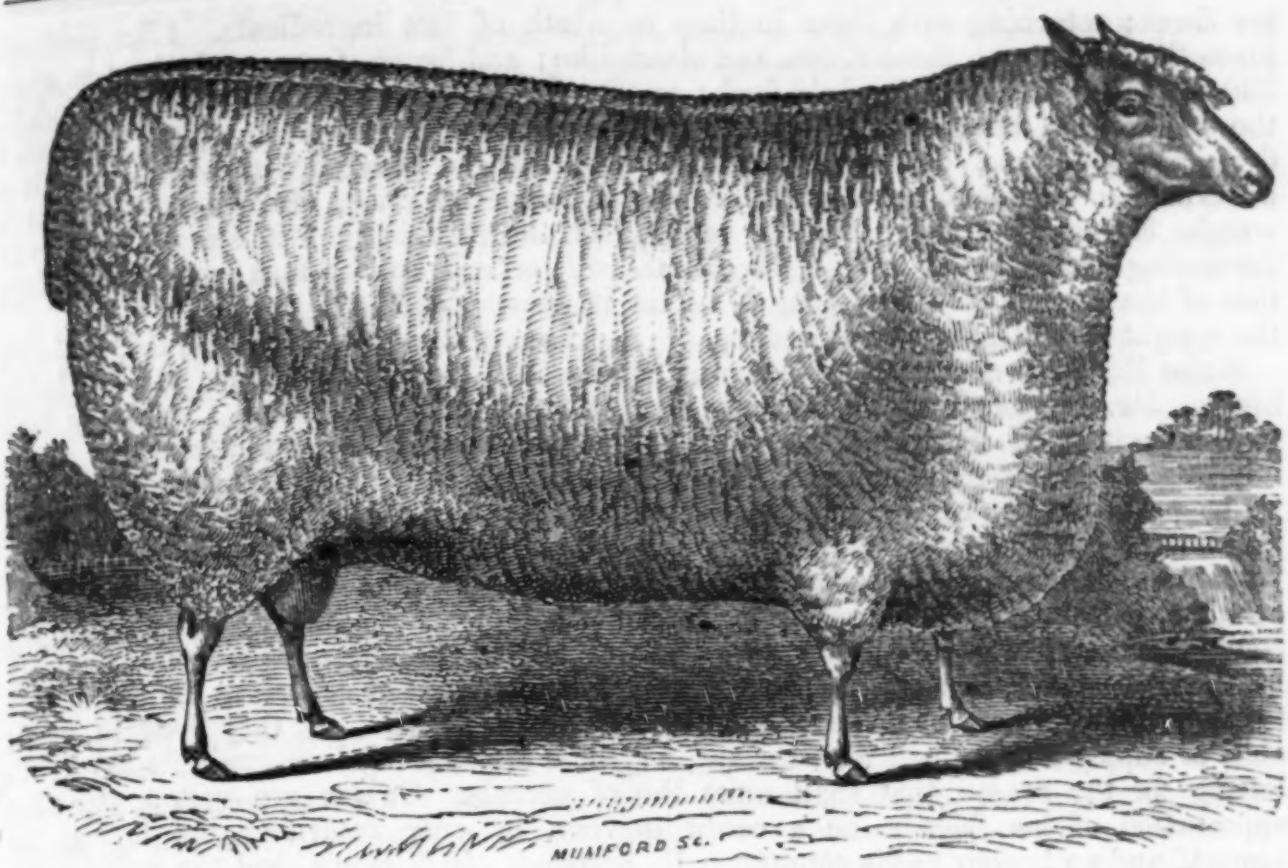
Last fall I prepared my entire crop, 162 bushels, using 200 lbs. salts, and nearly six barrels of slacked lime. I seeded two small parcels of wheat, one from Pennsylvania, the other from the southern part of this state, both containing a large portion of smut; if these prove clean the coming harvest I shall consider this preparation proof against smut. As we have discovered an antidote for this pest, I now no longer fear it, and will recommend to your subscribers in this part of the country, the change their seed wheat at last every two or three years, for I am fully satisfied from experiments I have made, that great gains will result from it.

A Subscriber.

Eastern Shore, Md., March 30, 1846.

---

Vevay Vineyard.—The Indiana Farmer and Gardener contains a notice of this vineyard. It was commenced by Swiss emigrants in 1801, at Vevay, on the banks of the Ohio. Congress granted them land on long credit. They brought their own native vines, and after struggling for years, they gave up the culture of the foreign vine. They turned attention to our native vine, first to the Cape grape, and subsequently to the Isabella and Catawba. After forty years of experience, they consider our climate and soil inferior to those of Switzerland for producing saccharine matter, and consequently wine. They say that, in this country, twelve pounds of grapes are required to make a gallon of wine, and, in the old country, ten pounds. At one time they had forty acres under cultivation; now only five. They say they can cultivate other products to greater profit.




## NEW OXFORDSHIRE BUCK,

*Twenty-three months old,—Live weight, 320 lbs.*

To the Editor of the Farmers' Cabinet:

Sir,—This splendid animal, the property of Clayton Reybold, Esq., son and successor to Major Philip Reybold, of Delaware, selected by him in England, and imported without regard to expense, is a fine specimen of a breed that now carries the highest premiums for long woolled sheep at the meetings of the Royal Agricultural Society of England. The breeder of the subject of our engraving having won the following prizes at their late exhibitions, defying all competition, viz:

At Oxford, £30 for the best Buck of any age; £30 for the best shearling Buck; and £10 for the best pen of Theaves, in the long woolled class of sheep, not Leicesters.

At Cambridge, £30 for the best Buck of any age; £30 for the best shearling Buck; and a bounty of £5 for a fat Ewe, shown as extra stock.

At Liverpool, £30 for the best shearling Buck; and $15 for the best pair of Ewes and Lambs.

At Bristol, £15, being the second prize for the best Buck of any age; £30 for the best shearling Buck; £15 for the second best shearling Buck; and £5, the second prize, for Theaves.

At Derby, £10 for the five best Theaves.

At Southampton, £30 for the best shearling Buck,—the sire of the subject of our engraving—£15 for the second best Buck; and £10 for a fat Ewe.

At the Smithfield Club Cattle Shows, for three years, the silver medal for the best sheep in extra stock, besides numerous prizes in the counties of Oxfordshire, Gloucestershire and Berkshire.

We call attention to the finely engraved portrait above, by Mumford, of "The New Oxfordshire Buck," lately imported by Major Philip Reybold, of Delaware, whose life has been spent in the accomplishment of good undertakings—witness his peach orchards of more than 1000 acres, with a daily sale of 5000 baskets of that delicious fruit; his fine flock of pure Leicesters, numbering many hundreds of the choicest animals; and the feeding of sheep of 147 lbs. dead weight, cutting five inches thick of fat on the rib! But not content with a flock that he had brought by judicious management to such size and perfection, he conceived the idea, that by importation, he might be able to add still more to the weight of his already unrivalled stock. Accordingly, Mr. Clayton Reybold proceeded to England the last summer, and after examining many of the finest flocks in that country, selected two Bucks of the *New Oxfordshire* breed, and eight of the purest New Leices-

ter Ewes; returning with them in time to place the Bucks with these Ewes, and about 230 of the finest of the Reybold flock; and the lambs from this cross, which are now dropping, give proof of the success of the undertaking. The subject of our engraving weighs 320 lbs. live weight, and is rapidly increasing in size; his fleece, in the estimation of the best judges, promising to attain the weight of 20 lbs. by shearing time.

Major Reybold retires from the farm, and his son, Mr. Clayton Reybold, succeeds him, with the intention of making the rearing of improved sheep his chief business. He will be happy to exhibit his flock to gentlemen desirous of introducing on their estates this valuable and increasingly important species of stock, flattering himself, that from Ewes confessedly unrivalled in this country, aided by further importations of the best sheep that can be obtained for money, he will be able to supply Bucks, both for sale and for letting for the season, that shall meet the approbation of his friends, be a credit to himself, and an honour to his country. P.

---

## Prepared Manures and their effects on Crops.

**The substance of the following remarks was lately delivered at the meeting of the American Agricultural Association in New York, by R. L. Pell. We copy from the American Agriculturist.**

Mr. Pell rose and said: By analysis it is known that all cereal grains, cruciferous and leguminous plants, trees, and shrubs, require in the soil the same chemical substances, but in different quantities. These are eleven, viz: potash, soda, lime, magnesia, alumina, oxide of iron, oxide of manganese, silica, sulphuric acid, phosphoric acid, and chlorine. If one be absent, the soil will not grow any cultivated plant. Hence analysis of soils is necessary for a proper and economical application of manure. In a barren soil one necessary ingredient alone might be absent. If, then, ten ingredients be added and the eleventh kept back, the soil is still barren. Hence, the reason why so much of New York will not grow wheat, and yet will grow other grain: the requisite quantity of some one or more chemical ingredients necessary for wheat is absent, but in sufficient quantity for rye, &c. When, at last, cultivated plants cease to grow, the five-finger vine appears, as it requires still less of them. In such a stage it is not rare that an expense of three dollars per acre, will enable the soil to produce 30 bushels of wheat. I produced 78¾ bushels of wheat on a piece of worn out ground, by fifty cents worth of two ingredients. Like produces like; and hence if straw of wheat be given to the ground it will produce wheat: indeed, wheat may be grown on a pane of glass, if the seed be covered with wheat straw in a decomposing state. Hence the farmer may sell the grain but not the straw. The farmer who sells straw becomes poor; he who buys it, grows rich.

I apply straw to the cattle-yard; it absorbs the liquid excrement, and rots. What is long or partly unrotted I apply to hoed crops; what is fine I mix with the eleven requisites and apply as a top-dressing. It may be advisable to apply the straw to the ground and plough it in when unrotted. To grow grains, give the soil straw of its kind; for potatoes, their vines; grapes, their vines; to apples, their branches; and so of all. The droppings of cattle are the best manure to grow grasses, as they feed on grass; those of horses fed on grain for the growth of cereals. Onions are grown year after year, by only returning the tops to the ground. In Virginia, had the refuse of the tobacco plant been returned to the soil, she would not now be barren. The bad farmer is injured by the vicinity of well manured land, as manure has an affinity for oxygen, hydrogen, ammonia, &c., floating in the air, and attracts them to the provident farmer's land.

Formerly, I applied composts of various things, and had wonderful results; I dared not omit any one, as I knew not which had produced the result. Now, science by analysis shows what is necessary. By these composts, I grew a squash to weigh 201 lbs., the heaviest on record; and a cabbage to weigh 44 lbs. By it I grew wheat to weigh 64 lbs., rye 60 lbs., oats 44½ lbs. When Sprengel made known his analysis, showing that eleven substances are necessary to all good soils, I found that my compost by chance had them all, and twenty other enriching ingredients.

Previous to 1840, my orchards bore only every other year. Since then I make them bear every year: and this year, a bad one for fruit, found my manured trees full, and those not manured barren. The drought of this year was fatal to fruit; yet my manured trees had abundant moisture and were fruitful. I prefer the manure of decayed vegetable matter to the excrement of cattle, as the material that makes and supports the animal has been extracted, and the excrement is not so rich on that account. If the vegetable matter be rotted and its ammonia fixed by charcoal dust, all the chemical substances are present. Thus rotted vegetable

matter is more beneficial than the dung of attle, quantity and quantity alike.

A most valuable manure is the liquid remaining after the boiling of bones. It is very offensive unless disinfected. When hot it is not offensive, but becomes so when cold. It is a jelly when cold. By the application of charcoal dust to the hot liquid, the jelly when cold is not offensive. In this state it may be made into compost with other substances. In that condition it is a most valuable manure. At present large amounts of the liquid are thrown into the rivers. I prevailed upon a grinder of bones to save his liquid by charcoal, and he now sells what formerly he hired carried away. I have used it with great advantage, both on arable and meadow land.

Charcoal is one of the most valuable manures. It is the most powerful absorbent known. It takes from the atmosphere oxygen, hydrogen, nitrogen, ammonia, &c., and holds them while the weather is dry. During rain it absorbs 80 per cent. of water, and releases the gases to descend to the earth to fertilize it. When the weather becomes dry it parts with the water, and absorbs from the air the gases again. This it continues almost perpetually, and it is nearly indestructible. When applied to the earth, the trees, plants, and grasses are found to have it adhering to their roots ready to impart gases and moisture as wanted. Trees packed in it have remained green for eighty days, while others without it have died in like circumstances. Hams and salt meats are preserved perfectly when packed in it. I preserved apples in perfect condition for one year in it. If spread over compost heaps, barn-yards, stable floors, in privies, it absorbs the ammonia, prevents offensive smells, fixes the volatile gases, and thus makes a valuable compost.

Ashes applied to sandy soils are valuable; and on some soils leached are as good as unleached. I have known land too poor to grow eight bushels of corn, made to produce forty-five bushels by ashes alone; and they are more valuable on a sandy soil than any other manure except marly clay. They enable the sandy soil to retain its moisture,—a great point. They are used to great advantage on Long Island and in New Jersey. They stimulate growth as does plaster. Sown broad-cast on grass, the effect is perceptible at a great distance. The yield the first year on sandy soils in grass, will pay the expense of applying forty bushels to the acre. They give to the soil silicate of potash, which is needed to form stems.

Ashes have two actions on soils, viz: chemically by alkali they neutralize acids; and mechanically by rendering sandy soils more tenacious. Muck is made valuable by them, when mixed in compost; the acid of the muck is destroyed by the alkali, and fermentation follows.

Lime has been used by me to great advantage. I prefer oyster shell lime, as it contains no magnesia, which most stone lime does. I think oyster shell lime has a tendency to lessen in growth the stem and leaves, and encrease the fruit and seeds. I put on barren or worn out land 300 bushels of oyster shell lime, and it grew wheat to a weight of 64 lbs. per bushel; with the wheat I sowed one bushel of clover seed and half a bushel of timothy seed per acre, and the next year cut two and a half tons, and the second year three tons of hay per acre. I have found it of great advantage in potatoe culture; the potatoes do not rot in the ground, while neighbouring unlimed ones *all* do. They are mealy and fine, and do not rot after gathering, and have been free of rot in dry, wet and average seasons. I think it destroys the fungus or insect, if either be the cause of rot.

Bone dust I have used and find it most valuable, and advise its use, especially on soils long cultivated, destitute of phosphate of lime; it is the most efficacious manure that can be used on an exhausted soil, but will do better on dry calcareous soil than on such as contain alumina. It should be mixed with earth to ferment before spreading. There should be used from 12 to 20 bushels to the acre. It seems best on turnips. In compost it is valuable, as it yields phosphates largely. It is said that in England, where on lands it had been applied twenty years before, its effect could be seen to a yard. I trust the exportation of bones from our country will soon cease.

I have used guano successfully and unsuccessfully. Mixed with earth and applied to plants in close contact, it was injurious; applied in weak solution to grass land and green-house plants, its effect was wonderful. My experience shows that *its method* of use will determine *its value*. In composts I have found it very effective.

Night soil is one of the most valuable manures. In this country, as well as in England, great prejudice prevails against its use in agriculture or gardening. For ages it has been used in Asia, and particularly in China. In France, in Belgium, Bohemia, Saxony, all the German confederacy, and Sweden, its destruction or waste is prohibited by law. In England and America it is thrown into the rivers to befoul them, and the fish which devour it are eaten instead of vegetables grown by it. As manure, six

loads of it have been found to produce 650 bushels per acre of potatoes, while, on the same ground, 120 loads of horse manure yielded only 480 bushels.

In conclusion, I have to remark that the main stay of the farmer is his barn-yard manure. Yet this varies in quality, according to the material of which it is made, and the manner of making. Thus the droppings of cattle fed on straw and turnips, are far less valuable than those of cattle fed on hay and oil cake; and it is economy to feed hay and oil cake rather than straw and turnips. So in manuring; that which is leached by rains and volatilized by the sun, is less valuable than the unleached and unsunned. But this is too extensive a subject to take up, and is so well understood by good farmers, that it is unnecessary to say more on the subject.

---

## Fellenberg School at Hofwyl.

It is not very likely that a school similar to the one described below, would succeed in this country, nor is it probable the attempt will soon be made, yet as much has been said about the Hofwyl Manual Labour School, and as valuable hints to the farmer may be gathered from the communication, we make the following extracts from a letter in the Cultivator of last month, from E. N. Horsford, dated at Geissen, the residence of Liebig, the celebrated Agricultural Chemist, in the Tenth mo. last, entertaining no doubt our readers will be pleased with them.—Ed.

Emanuel Von Fellenberg was descended from one of the oldest families of the nobility of Switzerland. Early dissatisfied with political life, he became a pupil of Pestolozzi. Inspired with the ideas of that great man, he resolved to devote his life and fortune to their developement. Superior to his master in the refinements of life and in wealth, he was scarcely second to him in zeal and firmness of purpose.

He consumed ten years in visiting schools, and otherwise fitting himself for the execution of his plans. Having sought through Switzerland a location uniting all the essentials to his conception of a site for a school, he fixed upon Hofwyl, an estate in Canton Berne, about five miles from the capital. It is a large irregular mound, embracing about two hundred acres. In the distance, on the east, are the Bernese Alps. On the west is the Jura chain. Lesser elevations between, crowned with forests of different ages, meadows rich in verdure, grain fields, and cottages embosomed in shade trees, greet the eye on every side as one looks out from the grounds upon which the group of buildings is situated.

The school was commenced with poor children, whose education not only, but whose food and clothing were provided. I cannot follow the history in its detail, showing how unwilling for a long time the humbler classes were to receive education as a gift—how from these little beginnings the institution has gone forward, till it now numbers some twenty-five professors and teachers, with pupils from every quarter of Europe—how M. Fellenberg was condemned for his enthusiasm—how his holy purpose to temper the keenness and lessen the pressure of want, stood, like the granite peaks in his land,—all unchanged, amid the shock of elements around—and how, full of years and of happiness, he has just closed his mission.

There were three schools founded by M. Fellenberg—two at Hofwyl, and a third at Kutti, another estate near. The latter is the school for agriculture. The higher school at Hofwyl, receives pupils from the more wealthy families, of whom there are about forty from England—the lower is for the poor. The courses of instruction are totally different.

The English Professor was kind enough to present my name and mention my wishes to M. Fellenberg early in the morning after my arrival.

September 29th, at ten o'clock, I announced myself at M. Fellenberg's office. He begged to be excused for a few moments, that he might complete a letter in progress. I walked up and down a little park or play-ground, looking out upon the grounds of the estate, and enjoying the dress now gradually being taken on by the forests —the yellow and red, with all intermediate shades between them and green, in such harmony and depth of colouring.

Connected with the school are eight or ten buildings, all of them large, constructed in a kind of Swiss style. The roofs are pointed and projecting, and from two of these, towers or spires run up, giving a singular and not unpleasant expression to the whole. Northward, at the distance of half a mile, and some fifty feet lower, are two small lakes. Beyond, on the right, a high range of wood-land, dotted with farm houses, orchards, groves, and in all directions, grass and grain fields, showing a soil of thorough cultivation, and a high degree of fertility.

At the close of a half hour M. Fellenberg joined me. He is about five feet eleven in height, large and fleshy. His eyes and complexion dark—his forehead far encroached upon by the hair from above. The features are rather heavy, though the countenance beams with earnestness, benevolence, and intelligence. His movements are rapid—in a word, his bearing throughout, is that of a

thorough-bred gentleman, upon a ground-work of well-balanced mind and christian principle.

He had been made acquainted with my purposes by the English acquaintance of last evening, and took me, without proposition, at once away upon a walk of a mile and three quarters, to the Agricultural school. On our way, he occupied my time with the subject of education, his father's peculiarities, Pestolozzi's great ideas, and all matters relating thereto, in a style of great clearness and simplicity, and with all the sincerity of expression that might be expected from an honest man, who knew the truth of what he was stating, and felt its importance. He does not pursue precisely the course of his father in instruction, because, he says, "I have not precisely the same constitution of mind; yet I arrive at the same result, though following another plan."

At length we came upon the farm-grounds, in the midst of which are erected two enormous stone edifices; one appropriated to the purposes of a barn, and consisting of mows, granaries, stalls for cattle, horses, swine, &c., and the other a boarding-house or farm-house with study-rooms, work-shops, store-rooms, and apartments for all purposes that could be connected with the domestic economy of the farm. Before us were the young men from sixteen to eighteen years of age, digging potatoes. They numbered eleven—three of the whole number were absent, or employed upon other duty. Many of them were bare-headed, and all of them in the peasant's *kittel*, (blue over-frock.) The potatoes were assorted as dug—the lesser from the larger, and the sound from the decaying. The little crop had been planted, hoed, and now harvested, throughout, by the scholars. In these labours, and in all the others of the farm, carried forward almost exclusively by the pupils, there is no play-work. M. Fellenberg intends they shall have a deep-seated conviction of what perspiration and fatigue are, and of how much ought to be expected from a day-labourer. Leaving them, we went to the meadow where they had been mowing—and to the garden where each had a little sub-division for himself, devoted to growing what he pleased. The larger kitchen garden was appropriated to cabbages, cauliflowers, beets, turnips, &c.

The barn being situated upon an inclination, was entered by wagons upon a bridge above, and the hay and grain discharged with little labour into the mows and bays below. On the first floor were the stalls; one series for calves,—fine looking creatures—another or two others for cows—all spotted, well-bred cattle, not large, but finely formed, in good condition, sleek, and good milkers—another series for swine, in which I recognized some Berkshires. The stalls were paved with small cobble-stones, and so inclined that the urine could be conducted to a reservoir without. Each cow was secured before a little trough and rack above, by a chain. No partitions of any description between them. On the same floor were broad apartments, for threshing, drying potatoes and beets, beside all the usual conveniences of a stock and grain barn.

In the cellar, which extends under a large portion of the barn, I was shown a quantity of potatoes—some two thousand bushels I should judge—which were all threatened with destruction from the almost every where prevailing potatoe sickness. All were ordered to be taken up again and dried. At my suggestion we took some specimens of the diseased roots to be examined with the microscope; but its power was too feeble to reveal anything satisfactory. The theories of this fearful malady, seem none of them suited to all the facts of the case. It has fallen upon the plant in dry soils and wet—and in other soils equally dry and wet it has not appeared. It has occurred in the shade, and again has left such a location unvisited. Soils highly manured have escaped, and have not escaped. It is not in Switzerland alone, nor in Germany—but in France and Austria, and England, and in America. Not this year only, but in previous years. To particular soils, degrees of moisture, exposure to sun, peculiar situations, or presence of unusual quantities of manure—to each and all it cannot be attributed. But I have almost forgotten Kutti and the farm-school.

From the barn we went to a room in the farm-house, where the register is kept. This apartment is furnished with a double row of inclined desks, back to back—all in a single frame-work, a few chairs, some shelves, and a board for some forty keys. Here the scholars write in their day-books all that has been accomplished, and all they have learned during the day, between seven and nine o'clock in the evening. M. Fellenberg showed me the day-book, journal, and inventory of the farm. The detail seemed almost immeasurable, but the system is so perfect that there is nothing like confusion in any of the accounts, or like difficulty in learning from them the exact condition of outlay and income. The milk-book, for example, had a record of all the cows' names, their ages, the amount and what kinds of food they eat, and the average amount of milk given daily, determined by admeasure-

ment at the close of each month; the amount sold, the amount fed to calves, the butter and cheese made, amount consumed, and quantity sold, &c. The day-book contained a record of each day's work, with what, and by whom. The other books, and there were several, were not less interesting, or the system of record less perfect. All purchases, outlays, productions, and losses, were displayed in the inventory sheet, and the absolute condition of the establishment shown by the balancing.

After inspecting these things we went to dine. A spacious hall with high ceilings, lighted on three sides, contains a table, chair, and a sliding cupboard, communicating with the kitchen below. Instead of a single cupboard carried up by cords and weights, this is double, one ascending and the other descending, the movement being effected by a cog wheel revolving in a chain connected at the extremes with the cupboards. A simple sentence of prayer for blessing upon the repast, and we were seated, M. Fellenberg at the head. The young gentlemen served the soup, rich boiled beef, cabbage, potatoes and bread, which constituted the whole dinner. At its close there was half an hour of relaxation; then all the young gentlemen assembled in the drawing-room, to receive an hour's instruction from their noble teacher. They were seated about two long tables, with their note-books, and in the apparel in which the potatoes had been dug.

It seems that the little republic of pupils had by an election of their own, appointed individuals of their number to the charge of each particular department of the matters to be cared for about the farm. One to the cow stables, one to the working cattle, another to the swine, another to the horses, another to the fruit, another to the rooms of study—the sleeping apartments—each a specific trust. One was elected to be leader in all kinds of work. Each had been required to draw up a scheme for conducting his own department of supervision. These schemes were successively called for, read and discussed; and here it was I felt the real greatness of M. Fellenberg. He elicited the warm but honest discussion of all the little points to be considered in these schemes, and found means to introduce a plain, easily to be comprehended, but deep and sound lecture upon the political economy, if I may so call it, of an agricultural community.

The first scheme was that of the leader in all work. It was well drawn up for a lad. Each article was read and discussed, or assented to without inquiry, as it seemed to impress the infant council. One topic I recollect particularly. "Should each member of a party engaged in the same labour, judge of the excellence of the mode employed? and should he express his judgment? and if so, before the work was commenced, while going forward, or when concluded?" At first there was a little reserve; then came a variety of opinions. All thought that each should exercise his faculties to discover the best mode. Some thought that if a different mode would be better it should be made known before the work was commenced, as after its conclusion the discovery would be of little service. Others, again, that after its commencement, one would be better able to judge of the relative excellence of the employed and proposed plans, and that the time for expressing an opinion, would be in the progress of the labour. Others still had different views, all of which showed that they have learned to *think*. The various opinions gave M. Fellenberg an opportunity to present the prominent features of a republican government—the necessity of obedience to some head, and confidence therein—the duty of investigation, and the proper time, as men and as gentlemen, for the expression of differing opinions when deliberately formed. His extempore alternate inquiry, reply, and dissertation, was one of the finest exhibitions of what a teacher may attain, I have ever known.

Each officer in the republic holds his place fourteen days, and each has the strong stimulus of M. Fellenberg's approbation, of personal review, and of the consciousness that he will be succeeded by one whose highest wish will be to excel his predecessor, to make him perform his service faithfully.

At the close of this exercise, which continued about an hour and a half, a storm had set in, and the labour out of doors could not be resumed. The study was continued. A book of agricultural problems was taken down, and several estimates for the consumption of fodder, fattening of cattle, &c., made. At length a problem to determine the number of cows they should be able to winter, feeding them so many pounds of roots, so much hay, and so much clover, per day. Last of all, how much land they would be obliged to devote for the whole coming year, in order to the requisite supply of grass, hay, potatoes, beets, &c., necessary to the *maintenance* of the stock, i. e., keeping in their present flesh, and how much more to furnish them with all they can eat—allowing each cow to weigh eight hundred pounds, so much hay, clover, and roots being

given, according to established data, and so much produce from an acre—being taken as the result of experiment. All went to work, and in about fifteen minutes the problem was solved. M. Fellenberg was with them, seeing that the operations were correctly performed, and taking all measurable interest in their work. There was certainly nothing very profound in the question as a mathematical task, but it was eminently practical, and has moreover one of the essentials to progress and success in agriculture, viz., *quantity.*

The rain continuing, the whole party went to another room, and remained two hours in cutting and coring apples to be dried. During this time I visited the sleeping-rooms, where each has a bed for himself—as is the case everywhere, so far as I have observed, on the continent—the room for drying seeds, the work-shops, and a variety of other rooms, and finally terminating in the apartment where all the scholars, with M. Fellenberg, were seated on benches, working at the apples. He had employed the time in such conversation as was adapted to fit them for the duties of men, discussing the little points of what I have called political economy of agriculture, for want of a better name. For this he is eminently fitted, for as one of the early poets says of his hero, "he has seen much of cities and of men." In a few moments we left.

While awaiting the solution of the fodder problem, I copied the following study plan for the summer term; 5—6, breakfast; 6—11, work; 11—12, study, (chemistry, mathematics, botany, and book-keeping, alternating with each other;) 12—1, dinner; 1—2, free hour, drawing, &c.; 2—5, work; 5—6, chores; 6—7, supper; 7—8, singing and garden work, alternately; 8—9, writing out notes and day-book; 9, gathering in assembly-room, and retiring.

Sunday; 5—6, breakfast; 6—10, free-time; drawing, sketching, and models; 10—1, church at Hofwyl; 5—6, excursion visit to peasant farmers, recreation.

The whole labour, and each and every kind of labour, is gone through with by the scholars. M. Fellenberg quoted Napoleon's maxim—that every soldier had a maréchal's commission in his pocket. So, I suppose, as they needed but the necessary experience and effort to win the epaulettes and command, each one of the pupils may attain to the most profitable farm direction, if he comes through the course of ploughing, hoeing, harvesting, and all the toil of his calling to this position.

The grounds are ploughed, the seed sown and harrowed in, the harvest gathered, and threshed with their own hands. Their day-books show how much horse-labour, man-labour, seed, and manure, have been given to each crop. They also show how much grain has been harvested, and sold; and a rainy day will enable them yet to bring the several quantities in the relations of investment, income, and profit or loss.

The milking of the cows is performed by the scholars in succession, each serving fourteen days. All the charge of the stock is entirely given up to them, and M. Fellenberg assured me there is awakened that regard for the domestic animals, which is so essential to their good preservation, and which, while it makes the scholars feel that they are confided in, relieves the day-labourer from an important responsibility. There is indeed on this beautiful and highly cultivated farm of more than two hundred acres, only a director, and at times a few day-labourers, the labour being nearly all performed by the pupils.

The agricultural employment—in other words, the labour—is made delightful, partly, I think, by there being just enough of it, but chiefly by the botany, physics, chemistry, mathematics, and drawing, with which it is all made in a measure scientific.

On our return, M. Fellenberg expressed his intention to teach, or have so much of chemistry taught, as would enable his pupils to analyze soils, manures, and ashes. This he will have done in winter, when the number of study hours will, in proportion, be greatly increased, and when all the pupils will return to Hofwyl. He would have them, hereafter, occupy the leisure of their winters with little laboratory investigations. He seems to think the result not of difficult attainment.

Parting with my noble acquaintance at the higher school-house, I received two volumes on Agricultural Education, one by himself, directed to the Landswirthschaftverein of Prussia, and the other by a pupil of his father, now at the head, M. Fellenberg assures me, of the best school of this kind in his acquaintance, situated in canton Appenzill.

---

RICE CAKES.—Boil a cup full of rice until it becomes a jelly, while it is warm mix a large lump of butter with it and a little salt. Add as much milk to a small tea-cupful of flour as will make a tolerably stiff batter—stir it until it is quite smooth, and then mix it with the rice. Beat six eggs as light as possible, and add them to the rice.

Serve them with powdered sugar and nutmeg. They should be served as hot as possible, or they will become heavy.

## Notes on the Vine.

By John M'Donald.

Dr. Lindley, a received authority at the present time, says, "the system of English grape-growing requires to be changed." As I have for some years thought so too, and acted conformably to the idea, I may, perhaps, be allowed to say a few words on what I have in practice found to be a simple and sure method of growing the Vine well and profitably. If we may judge from the commotion making by the Polmaise system, and Hoare's new work, the Vine culture, like the Pine culture, is destined to be revolutionized, and made, in the first place, a nine days' wonder to the mere looker-on, and perhaps many years' annoyance to the practical man.

The Vine is undoubtedly accommodating and ductile in its nature, beyond, perhaps, any fruit-bearing plant we possess, otherwise it would never do so well under such and so many various treatments. Still there is undoubtedly a right way. My own experience, combined with fourteen years' observation, puts it in my power to say that *deep* borders of *retentive* or *highly manured* soils are *not*, as is often maintained, the most suitable medium, nor the most profitable, in which to grow the Vine. It must be obvious to all who may give themselves the trouble to think or observe, that grapes growing on vines in such borders, are in general, and in cold, wet seasons, particularly, apt to be ill-coloured, of indifferent flavour, and with a strong tendency to shrivel prematurely, while the young wood, in all but the earliest forced house—which under such circumstances, will be small and long-jointed—will require much firing to ripen it; which artificial heating, if accomplished by the medium of smoke-flues, will be sure to encourage the generating and ravages of red spiders and such pests.

Therefore, seeing such to be the produce and consequences of *deep rich borders*, and a *high dry atmosphere*, theory would lead us to conclude that *shallow* borders of *light porous* soil would be the most fit and proper medium into which to plant, and that a *high* day temperature, with *abundance of air*, and a *low* night temperature, with *abundance of moisture*, and a close, calm atmosphere, would be the most proper climate in which to grow the vine; theory, I say, would lead, and did lead me to conclude thus years ago; and in practice I have had ample proof of the correctness of such surmises.

When I entered into the charge of the gardens at Riccarton, in May, 1842, I found the vines growing in wide and very deep borders of rich, heavy, and retentive soil; where, notwithstanding the drought and warmth of that summer, they made wood, the best cane of which was scarcely the thickness of an ordinary goose-quill; and leaves, the largest of which would scarcely cover the palm of the open hand; and fruit small, with a great tendency to shrivel, the very best of which was but ill-coloured and of indifferent flavour. I certainly felt vexed and annoyed at the circumstance, but had the consolation—if so it may be called—of being informed by my employers, that such, *and no better*, had been the crops and appearances of the vineries for many previous and successive years. Next autumn I pruned the vines severely, and early in spring, 1843, I lifted their roots, excavated out the soil in which they were planted, to the depth of thirty inches, then trod and beat into a pretty firm floor, with a good slope outwards, the surface at which I had then arrived, and upon which I laid a stratum, one foot in depth, of old peas sticks; above which I placed a stratum of decaying tree leaves, and some partly decomposed herbaceous refuse, mixed with light, rich, but very sandy soil. On this stratum I laid the roots, and over these I put about a foot of the original soil, made lighter by the addition of a considerable quantity of lime rubbish, sand, and thoroughly decayed leaves—indeed, upwards of one-third part of the one foot thick stratum over the roots was composed of these light, poor materials. The consequence has been that now, in autumn, 1844,—eighteen months after the operation—the canes all over the houses are round, firm, short-jointed, plump-eyed, having leaves from eighteen to upwards of twenty inches direct across, and fruit of first-rate quality. My employers, and many others who have tasted of it, say so. Some canes of the last year's growth, have this season borne twelve pounds' weight of fruit; and some canes of this year's growth will, next year, easily, and well, bear and mature twenty pounds of fruit.

Making this assertion of the capabilities of an annual cane, leads me, in conclusion, to attempt to give you a sketch of my mode of training and pruning the vine, as it is different from the modes practised in this locality.

During the first year—it matters not whether the plant be a young one, or a cut-over old plant—one shoot, and only one, is trained up direct under the rafter; one, of course, from a *different* root being trained up under the centre of the sash; and so on, one under each rafter, and one under each sash, all over the house, and all trained and treated

alike; which shoot is allowed to grow unchecked until it has attained a length of six to eight feet, when, having it well grown, from fifteen to twenty eyes or buds formed, it is stopped then, and repeatedly afterwards, during the season. When the pruning arrives—which, with me, is the end of autumn, —all the indifferent eyes or buds are scooped out from the shoot, until ten or twelve only are left. These will next season produce strong shoots, having, some three bunches of fruit, some two, and all at least one bunch; which bunches must be cut away, or thinned, until only what will mature to ten or twelve pounds of fruit are left. All the shoots, of course excepting the mother, or leader shoot, *and one from the base* of the plant, are stopped one eye beyond the fruit, while the leader and base shoots are each allowed and encouraged to perfect their ten or twelve good eyes, for next or third year; on which year the original cane, same as second year, bears fruit only on the shoots proceeding from the twelve eyes on previous year's growth, the twelve shoots on the under part of it being cut close away after bearing first and *only* crop, and no others allowed to emanate from *their* parent stem in their place, which place will be occupied on this, the third year, by the shoots proceeding from the young, or base shoot, of previous year's growth. On fourth year a third young or base shoot is allowed to perfect its twelve or fifteen eyes, and the original cane, after bearing a crop on its twelve upper eyes, is cut clear away as near the ground as possible; and so on, year by year, a young cane is started, and an old one cut away. Thus, bunches of fruit, numerous as by the open system, and much heavier, may be had regularly all over the house, without old or weak wood, or confusion of training.

Here I have said nothing of planting, as I take for granted that gardeners in general, would have grown the roots of their vines outside the house, and the stem introduced *under the surface* of the soil into the house. —*London Horticultural Magazine.*

---

## Agricultural Meeting.

At a stated monthly meeting of the Philadelphia Society for promoting Agriculture, held on the 1st of April, Kenderton Smith, Esq., Vice-president, in the chair. The minutes of last meeting were read and adopted.

James R. Wilson, of Philadelphia, and Nathan Rambo, of Montgomery county, were elected members. A committee appointed at last meeting to prepare a list of crops, for which premiums would be offered the approaching season, reported the following articles, which on motion was agreed to, and ordered to be published, to wit:

For the best field of wheat, not less than three acres, $10.

For the best field of rye, not less than three acres, $10.

For the best field of corn, not less than three acres, $10.

For the best field of barley, not less than three acres, $10.

For the best field of oats, not less than three acres, $8.

For the best field of potatoes, not less than one acre, $8.

For the best patch of sugar beets, not less than half an acre, $8.

For the best patch of carrots, not less than one-quarter of an acre, $8.

For the best patch of parsnips, not less than one-quarter of an acre, $8.

For the best patch of ruta-baga, not less than half an acre, $8.

For the best patch of flat turnips, not less than one acre, $8.

For the best patch of turnips, excellent new variety, not less than one quarter of an acre, $8.

For the second-best crop of either of the above, a copy of Colman's Journal.

An account of the expense and manner of cultivation will be required of competitors, and also satisfactory evidence of the products of each crop. Application can be made to the following named gentlemen, who were appointed a committee on crops, viz: George Blight, Isaac W. Roberts, David George, Samuel Williams, and S. S. Richie.

On motion of A. S. Roberts, a committee of five persons was appointed to prepare a list of animals, produce, farming utensils, machinery, &c., &c., for which premiums would be offered. Also to fix the rate of premium, and the time of holding the Annual Exhibition of the Society, and make report to the next monthly meeting. The committee consists of A. S. Roberts, R. T. Potts, Dr. Elwyn, S. C. Ford, and Aaron Clement. On motion adjourned.

Extract from the minutes.

AARON CLEMENT, *Rec. Sec.*

Philadelphia, Apri 4th, 1846.

---

## Benson's Patent Water Ram.

We find in the last American Farmer, the following letter on the subject of raising water, about which numerous enquiries have been made, since the publication of J. H. B. Latrobe's letter, in No. 2 of our last volume, and Reeve and Brother's communication two months ago. The cost of Benson's Ram delivered in Baltimore is $30. A half inch leaden pipe will dis-

charge 25 bbls. in twenty four hours, the cost of which is six cents a foot. Printed directions accompany the Machine. "In one instance," says the *American Farmer*, "a gentleman having a spring of water in a meadow 1000 feet from his house, and 65 feet perpendicular depth below it, by the power of a small branch of impure water, that affords five gallons per minute, with a fall of eight feet, has 720 gallons of pure spring water per day, delivered into a reservoir in his kitchen by means of this simple apparatus. From this reservoir, by a lead pipe, all the water not used in the family, is conveyed from the reservoir into a trough in the barn yard, where the coldest weather never freezes it, and where his cattle have a copious supply of water during the whole year. In another instance, with a stream of water with nine feet fall, the water is elevated to a height of 156 feet."

Several Chester County farmers have been successful in raising water, at a small cost. The address of *B. S. Benson*, the Patentee, is Jerusalem Mills, Harford Co., Maryland.—Ed.

Harford Co. Md. March 19th, 1846.

Dear Friend:—Your request relative to the usefulness of the improved Ram of B. S. Benson for raising water, shall be complied with.

I had one of them put up on my farm, and I pronounce it to be the best mode of raising water that I have ever seen or heard of; it is simple in its construction, and of course not so liable to get out of order as more complicated machinery, doing more work than can be done in any other way yet invented with the power.

I have a fine spring on my farm, which passes through a one and a quarter inch lead pipe, making the power for driving the machine, with a fall of about eight and a half feet—a part of this water is thrown up to my house, through a half inch lead pipe, and furnishes us with a sufficiency of water for our stock, as well as the household purposes. The distance that the water is thrown is 445 feet, the perpendicular height about 75 feet; all done by the power of a good spring; where springs are not sufficiently strong of themselves to afford power to drive, and water for the use of farm buildings, a small stream of branch water may be used for the power, whilst the spring water can be introduced and driven to the buildings without mixing with the branch water—giving at all times clean, cool, spring water for the various uses about the house. And I do not hesitate to say, that he who has once seen in operation, one of these machines, and loves a clean house, will not fail to place within the power of the female, that element most needed for that purpose. There might be a great deal said about the convenience afforded, but it is sufficient when I say, that I can have water from the garret to the cellar.

Yours, &c. Cheyney Hoskins.

## Disease of Plum Trees.

John Owen, of Cambridge, Mass., believes he has discovered a remedy for the *wart* in the Plum tree. In a late number of the *New England Farmer*, we find a letter from him to Th. Wm. Harris, from which we make the following extracts The editor has found in New Jersey the diseases of this tree so annoying as almost to amount to a prohibition to planting it. If Plum trees are planted in hog pastures, and properly protected for three or four years, till the rubbing of these animals against them will not injure them, it will be found advantageous. In planting fruit trees, farmers should persevere. If disease overtakes their trees, let them reflect, and search for a remedy. What greater, and yet cheaper luxury does the farmer and his household enjoy, than that of fruit? How little time is required, to plant a tree? But the bare planting, let it be remembered, is but part of the duty; subsequent care and protection are requisite; and he who plants and protects, will hardly miss the time or the expense, and may enjoy in cheap and wholesome luxuries, the reward of his care. When within reach of a market, what product of his field or garden is more profitable than *good* fruit?—Ed.

Cambridge, March 6th, 1846.

In the spring of 1841, I had a Washington plum tree badly affected by a wart upon the main stem, commencing a little above the lower branches, exactly in a fork formed by the stem and one of the principal limbs, extending about three inches on the limb and about ten inches up the stem, and covering quite one-half of the bark for that distance. Amputation seemed the only thing to be done, and had it been merely a limb which was diseased, I should have cut it off without hesitation. But the part most affected was the trunk itself. While considering what I had better do, the appetency of the plum tree for salt, occurred to me, and I reasoned thus: if the plum tree was found to flourish best in those soils in which the muriate of soda (common salt) abounded, which appears to be a well established fact, then, disease of this tree might arise from the absence, or an insufficient supply of the salt, and if so, the tree could only be restored to a healthy state by furnishing to the soil what it so essentially lacked. I accordingly salted the earth about the tree. But here a serious difficulty presented itself. The case is that of a valuable tree, and the disease is upon the very trunk, and may soon girdle it. The question arose, cannot the canker be arrested and possibly cured, by a direct application of the brine to the part affected, while the permanent remedy is provided by the slower operation of dry salt applied at the roots! I resolved to make the experiment, which I did in the following manner: Having cut out the excrescence with some care, I washed the wound with a strong solution of salt and

water, and awaited the result with not a little anxiety; for I confess I had my fears that the lotion might have been too powerful, and by absorption, prove injurious instead of being beneficial to the tree. All apprehensions of this sort, however, were speedily removed. The wound began to heal, and the canker, though not entirely cured, was materially checked. As the wound continued to heal, the wash was freely applied several times during the summer.

In the spr ng of 1842, I again used the knife, cutting out whatever canker had appeared since the first operation, and applied the same wash as before. During that season, the new wounds gradually closed over without any further appearance of the wart, and the part was thus restored to a perfectly healthy condition. From that time to the present, the tree has shown not the slightest symptom of the old disease. It has been regularly washed with some solution of salt, once or twice every year, in 1844 and since; salt-ley (the liquid remaining in the soap-boiler's kettle after the removal of the soap,) being substituted for the pure brine.

In the spring of 1844, the wart again made its appearance on several of my young Damson trees. The disease being confined to small limbs, and having nearly girdled them before I discovered it, I should at once have cut them off, but for the desire to pursue my experiment with salt in a different way. I proposed to ascertain its effect upon the wart itself, while still connected with the tree. For this purpose, I fastened a porous substance around each wart, and kept it filled with ley, which was completely saturated with salt. Here the effect was even more remarkable than in the first experiment. In a few weeks, the warts were completely destroyed, and cracked so as to be easily picked off, leaving the adjoining bark and wood perfectly sound. Such are the facts, let careful and assiduous cultivators continue to record and publish their observations. Let amateurs, especially, be invited to make all their experiments with a strict regard to science, not always having an eye to the immediate profit of a garden, but more frequently to the discovery of truth and the good of posterity.

---

## Philadelphia Butter:

### *Its high flavour, and the source whence this is derived.*

The following letter of Dr. Emerson deserves attention; and while Philadelphia is celebrated for her good butter, we have heretofore more than once felt it our duty to make the enquiry, Why we have so much indifferent butter in our market. It is not easy in the winter to procure perfectly sweet and delicious *tub* and *keg butter*, and this, we believe, is greatly attributable to lack of skill and care in its preparation for market. It is a great loss to the farmer, and cause of vexation to the purchaser.—Ed.

*To the Editor of the Farmers' Library:—*

My Dear Sir,—During one of your late visits to Philadelphia, we had some conversation relative to the rare qualities of Philadelphia butter, which, though good at all times, is at one season distinguished by a peculiarly high and delightful flavor not to be found in the same degree, so far as I can learn, in butter made in any other part of the Union. I told you that I thought I had discovered the source of this peculiarly grateful flavor, and now undertake to redeem a promise made to write you on the subject.

In the first place, I wish you to bear in mind, that the original settlers in the old counties adjacent to Philadelphia, were chiefly from Wales, and hence may claim a legitimate right to excel in the processes of the dairy. They took up their abodes among the hills, and as indispensable appendages of their farm houses, built what they call "Spring Houses," over the natural fountains flowing out of the hill sides. These are shaded by wide spreading trees tending to preserve the coolness imparted by the water surrounding the vessels containing the milk, cream and other dairy products. A temperature is thus secured for the cream established by experiments as the most favorable to the perfect operation of churning, namely, the range from 50° to 65°—beginning with the cream at or near the first named degree, and terminating the process with the temperature at 65°. It is only after the butter has "come," that warm water is to be added so as to raise the warmth to 70° or 75°. This is to facilitate the separation of the butter from the milk. No one who has ever visited Pennsylvania spring houses and observed the coolness and cleanliness they usually display, can doubt the great advantages afforded by them for dairy purposes.

But, though these circumstances may serve to improve the general qualities of Philadelphia butter, still they are by no means concerned in producing that delightful flavor, the immediate cause of which is the main point to which I now wish to call your attention. As before intimated, it is only at one season that the flavor is in greatest perfection, and hence our housekeepers call it "May butter," and sometimes "grass butter." The limits of the season of highest flavor may be set from about the middle of April to the middle of June. Now it is precisely during this time that the old,

unploughed meadows and pasture fields in the vicinity of Philadelphia abound with a species of grass so highly odoriferous as to have obtained the name of *Sweet-scented Vernal Grass.* Botanists call it *Anthoxanthum odoratum.* The scent somewhat resembles that of vanilla. It grows about a foot or eighteen inches high, rising above the surrounding grass. Its stem is very small and round, with a few long and slender leaves. Its odor will alone be sufficient to distinguish it from all other grasses found in our pastures. When in blossom, the air is often highly charged with its scent, and at this time I seldom ride into the country without gathering a handful of the grass to enjoy its rich perfumes at leisure, and perhaps store it away in a drawer. As it is so very forward in its growth, so does it show the earliest signs of decay. About the middle of June the fields and meadows where it abounds assume a yellowish appearance from the dying of the stems of the first growth. The cattle press these aside to get a greener herbage, and now the high flavor of our butter declines.

The Sweet-scented Vernal Grass is a native of Europe, whence it has doubtless been introduced into the vicinity of Philadelphia, blended probably with other grass seeds. It has long become naturalized, and now occurs among other spontaneous herbage, disputing the right of soil with the common green grass, and never yielding possession till turned under by the plough, after which it clings to the unbroken fence and headrows. Though seldom, if ever regularly sown here, it constitutes a part of the growth of most English pastures, thriving in nearly every kind of soil. The sweet odor for which English meadow hay is so noted, comes from the admixture of this grass. It is, however, seldom, if ever sown by itself, but usually mixes with the seeds of other grasses adapted to the formation of permanent pastures. It ranks rather low on account of nutritious properties, but is principally esteemed for its early growth, and continuing to throw up fresh shoots till the end of autumn. Indeed, the aftermath, or second growth, is particularly prized for grazing purposes.

A chemical examination of the Sweet-scented Vernal Grass, shows that while its nutritious properties are less than those of most other grasses, it is distinguished from these by containing *benzoic acid*, or *flowers of benzoin*, a substance possessing a peculiarly agreeable aromatic odor. An essential oil in which this resides can be distilled from the grass, affording a pleasant perfume. It is undoubtedly this aromatic ingredient that imparts to the milky secretion of the cow, the flavour so pleasantly manifested in Philadelphia Spring-grass butter. When we find milk so readily imbued with the peculiar flavors of garlic, turnips, and other substances upon which cows often feed, there can be no room to doubt that a fragrant grass freely eaten by cows, should likewise impart its particular flavor to the milky secretion.

If this very simple solution of the cause of the high flavor of Philadelphia Spring butter be true—and I have not the least doubt upon the subject, you can at once perceive that a pasture grass may be introduced almost everywhere, which will communicate an exquisite flavor to butter.

In London, Epping and Cambridge butter are both greatly extolled for their high and delicate flavor. The cows producing the former, which is most esteemed, graze during summer in the wild pastures of Epping Forest, and the high flavor of their butter has been commonly ascribed to the wild shrubs, plants, and leaves of trees which they feed upon. The Cambridge butter is also produced from cows that graze upon natural pastures, one part of the year on uplands, and the other in rich meadows. As the Sweet-scented Vernal Grass is common to the natural pastures of England, I doubt not it may be found most abundant in those of Epping, Cambridge, and other places most celebrated for high-flavored butter. So far as I can find by inquiry and research in English books, the particular grass which contributes the greater part, if not all the fine high flavor to the best and most costly butter, has never, as yet been identified. Without such exact knowledge, this flavor of butter must necessarily remain beyond the control of the agriculturist, wherever nature or accident has not provided the pastures with the aromatic agent.

I remain very respectfully yours, &c.,

G. Emerson.

---

## The Potatoe Disease.

The following is an extract from a letter from Professor Liebig to Walter Crun, of Thornliebank, dated Giessen, 5th November, 1845.

"The researches I have undertaken upon the sound and diseased potatoes of the present year, have disclosed to me the remarkable fact, that they contain in the sap a considerable quantity of vegetable casin (cheese) precipitable by acids. This constituent I did not observe in my previous researches. It thus appears, that from the influence of the weather, or, generally speaking, from atmospheric causes, a part of the albumen which prevails in the potatoe has become converted into vegetable casin. The great instability

of this latter substance is well known—hence the facility with which the potatoe containing it undergoes putrefaction. Any injury to health from the use of these patatoes is out of the question; and nowhere in Germany has such an effect been observed. In the diseased potatoe no solanin can be discovered. It may be of some use to call attention to the fact, that diseased potatoes may easily, and at little expense, be preserved for a length of time, and afterwards employed in various ways, by cutting them into slices of about a quarter of an inch, and immersing them in water, containing from two to three per cent of sulphuric acid. After 24 to 36 hours the acid liquor may be drawn off, and all remains of it washed away by steeping in successive portions of fresh water. Treated in this manner, the potatoes are easily dried. The pieces are white, and of little weight, and can be ground to flour, and baked into bread along with the flour of wheat. I think it probable that the diseased potatoes, after being sliced and kept for some time in contact with weak sulphuric acid, so as to be penetrated by the acid, may be preserved in that state in pits. But further experiments are necessary to determine this. It is certain, however, that the dilute sulphuric acid stops the progress of putrefaction."—*Glasgow Herald.*

**THE FARMERS' CABINET,**
AND
**AMERICAN HERD-BOOK.**

PHILADELPHIA, FOURTH MONTH, 1846.

A VALUED friend at Gettysburg, in a letter speaking of the Cabinet, "begs leave to suggest the propriety of giving us more practical facts, rather than filling the paper with speeches at agricultural fairs, and controversies about ploughs, which are only known to particular sections of country. What we want to know, is how to raise the greatest amount from a certain quantity of ground, with the least labour and expense, Give us the facts, my dear sir, with the *modus operandi*," Now this is all very well—and looks particularly well on paper; and we have more than once solicited our friends to furnish us with statements of facts, and we acknowledge many obligations to them. We would query with our Gettysburg friend, whether *he* has done his part in relation to *facts* and *operations?* It should not be forgotten, that the editor cannot sit in his office, and *make* facts. He asks that they may be given him;—he asks, in short, the hearty co-operation of his friends in this matter,—and every subscriber he is in the habit of considering a personal friend, for there is growing out of this connection, a pleasant kind of acquaintanceship, which may mutually attach and interest. As was lately said by another correspondent in Maryland, "the work is a good one, let us go ahead."

A MEETING was held at Rockville, Montgomery Co., Md., on the 4th ult,, for the purpose of forming an Agricultural Society, for that county. A committee was appointed to prepare a Constitution to be reported at a subsequent meeting.

---

THE name of *Mahlon* Gillingham, on p. 256 of last number of the Cabinet, is an error:—It should be *Chalkley.*

---

WE received some time ago, through the kindness of a friend—we presume of the Recording Sec., Asa Fitch,—"The Washington County Post," published at Salem, N. Y., containing an account of the spirited proceedings at the Annual Fair of the Agricultural Society of that county, in the tenth month last. It should have been earlier referred to, but was mislaid, and escaped notice.—How does it happen that these Northerners beat us so much in raising corn? Ought not we in this State, our summers being a little longer—at least to equal them? And ought not our good farmers of Burlington, Gloucester and Salem, on their delightful Jersey soils, to surpass all others in the corn crop? And Delaware and Maryland too, where are they? Calvin Skinner of Cambridge reports 131 bush. 26 qts. of corn to the acre; and John McNaughton of Salem, N. Y., takes the second premium for 128½ bushels. Eighty-six and a half bushels of oats were raised by Andrew Thompson. The efforts of this society really seem to have stirred up its members to good purpose. "Who thought five years ago," says the Report, "that 46 bushels of wheat—40 bushels of rye—100 bushels of oats—120, and 130 bushels of corn, could be produced upon an acre in this county? The most fertile districts of the vaunted west, would be proud of such crops as these. Some of them fall but little short of the largest yields that are upon record; they conclusively show that the worn out hills of old Washington can successfully compete with any section of our country."

The kindness of L. Ledyard, the Recording Secretary, has placed also on our table, the Transactions of the Madison County Agricultural Society, N. Y.. containing an article on the Geology of the county, and also the addresses of L. Ledyard, and Prof. Conant. These annual publications of the doings of agricultural societies, are indicative of the strong interest felt in the proper developement of our agricultural means, and cannot fail to give a stimulus to improvement.

---

THE quantity of rain which fell in the 3rd. month, 1846, was a little more than four inches and a half.
..... 4.6 inches.
*Penn. Hospital, 4th mo. 1st,* 1846.

---

THIS is the season,—and we trust the generality of farmers do not need to be reminded of it—to provide for a plenteous supply of vegetables. They make cheap living, as well as wholesome and good, and greatly add to the luxuries of diet. Some farmers are apt to think labor spent in the vegetable garden almost thrown away:—The very contrary, we think is the fact. Plant plentifully, nurse carefully, and the whole season, enjoy richly.

The patentee, Dr. Geib of this city, has placed on our table, a little *Manual* for the writing master; a practical and critical Treatise on Pennmanship. We some time ago referred to his *Chirographast*, as an ingenious aid for the aspirant to the accomplishments of the pen. To those, who like the editor, have long been accustomed to making crooked and ugly marks, which run in all directions but the right, and which few can decypher but themselves,—and sometimes not even they—all these increased facilities and mechanical helps, will be valued.

---

In the Cabinet, two months ago, we noticed a "Treatise on Milch Cows,' by *Monsieur Guenon*, which was in course of translation by *N. P. Trist*, for the *Farmer's Library*. Since that time, Greely & McElrath have published the work separately at thirty seven and a half cents a copy.

---


## New York Agricultural Warehouse.

Farmers, Planters, and Gardeners will find the LARGEST AND MOST COMPLETE assortment of Agricultural Implements of all kinds at this establishment, ever offered in the New York Market. Most of these implements are of new and highly improved patterns, warranted to be made of the best materials, put together in the strongest manner, of a very superior finish, and offered at the lowest cash price.

Among these implements are upwards of FIFTY different kinds of Ploughs manufactured by Ruggles, Nourse and Mason, of Worcester, Mass., also in New York—for the South as well as for the North; Harrows of different patterns and sizes; Rollers of wood and cast iron on a new principle; Seed sowers for all kinds of seeds, a recent invention; Cultivators, with different kinds of teeth; Horse Powers of wood or of cast iron, very strong and superior; Grain Thrashers: Fanning Mills; Mills for grinding corn, &c., a new invention; Corn Sheller for hand or horse power, the latter shelling 200 bushels of ears per hour; Vegetable Cutters, will cut a bushel of roots for cattle in two minutes; Hay, Straw, and Corn stalk Cutters; Scythes, Rakes, Shovels, Spades, Hoes—indeed Field and Garden Tools of all kinds.

*Castings* for the various kinds of Ploughs manufactured in Worcester and New York.

*Seeds for the Farmer and Gardener.*—A choice assortment of the various kinds, such as improved Winter and Spring Wheat, Rye, Barley, Oats, Corn, Beans, Peas, Rutabagas, Turnip, Cabbage, Beet, Carrot, Parsnep, Clover and Grass Seeds, and improved varieties of Potatoes.

*Wire-Cloths and Sieves.*—Different kinds and sizes constantly on hand.

*Fertilizers.*—Peruvian and African Guano, Bonedust, Lime, Plaster of Paris, &c.

*Fruit and Ornamental Trees and Shrubs.*—Orders taken for these, and executed from a choice of the best Nurseries, Gardens, and Conservatories in the United States.

*Horses, Cattle, Sheep and Swine.*—Orders executed for stock of all kinds, to the best advantage.

*A Descriptive Catalogue.*—This will be sent to any one *gratis*, upon application, *post paid*, to the subscriber. It comprises nearly 60 pages, and is illustrated with a great variety of wood cuts.

*The American Agriculturist.*—A monthly publication of 32 pages octavo, handsomely embellished with numerous engravings. Price $1 a year.

*The American Agriculturist Almanac.*—32 pages, with wood cuts. Price $15 per thousand.

*Agricultural Books.*—A general assortment of all kinds.

A liberal discount made to dealers.

A. B. ALLEN,
No. 187 Water Street, New York.

March 14, 1846.—2t.

---

☞ SHORT ADVERTISEMENTS, ☜

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

---

## SEED STORE,

### No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red Clover, and other grass seeds; fresh Perennial Rye-grass, and Lucerne seed. Field seeds, consisting of choice Spring Wheat, Barley, Potatoe Oats, Northern and other seed-corn. Also, in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., Feb., 1846. tf.

---

### Agency for the Purchase & Sale of
## IMPROVED BREEDS OF CATTLE & SHEEP.

THE subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay. AARON CLEMENT.

*Jan. 15th*, 1846.

---

## COATES' SEED STORE,

OF MORE THAN FORTY YEARS STANDING,

*Where may constantly be had*

**Clover, Timothy, Orchard, Herd,**

AND OTHER

## GRASS SEEDS,

TOGETHER WITH A COMPLETE ASSORTMENT OF

## GARDEN SEEDS,

Of the finest Quality and best Varieties,

JOS. P. H. COATES,
*No. 49, Market st., Phila'a.*

Are sold only in Philadelphia, at the SEED AND IMPLEMENT WAREHOUSE of the subscriber, No. 65 Chesnut street, below Third, North side.

DAVID LANDRETH.

Purchasers will observe that the above seeds are essentially distinct from those obtained by ☞ *Foreign Importation* or *Chance Purchase* ☜ at home, which are generally, *at best*, uncertain.

☞ Extract from the "REPORT" of the "VISITING COMMITTEE of the PENNSYLVANIA HORTICULTURAL SOCIETY;" *approved and ordered to be printed.*

### "Landreth's Nurseries and Gardens.

"These extensive grounds are on Federal street, near the Arsenal. * * * * * The earliest collection of Camellias was made here. Some of those now in the possession of these distinguished nursery men, are ten feet high. * * * * * The selection of GREEN-HOUSE PLANTS is valuable and extensive. * *

"The NURSERIES are all *very correctly managed*, supplying every part of the Union; a detail of which would occupy too much of our space; we therefore content ourselves with stating that the stock is very large, and in every stage of growth, consisting of

### Forest and Ornamental Trees, Shrubs, Evergreens, Vines and Creepers,

with a collection of herbaceous plants; *Fruit Trees* of the best kind and *most healthy condition;* large beds of seedling apples, pears, plums, &c., as stocks for budding and grafting; *a plan very superior to that of working upon suckers*, which carry with them into the graft all the diseases of the parent stock. * * * * *

### GARDEN SEEDS

of the finest quality have been scattered over the country from these grounds, and may always be depended upon. The SEED ESTABLISHMENT of these HORTICULTURISTS is one of *the most extensive in the Union*, and its reputation is well sustained from year to year.

"To obviate the chance of mixture of the farina of the plants of the same family, they have established another nursery, at a suitable distance, so that degeneration cannot take place, and which secures to the purchasers 'a genuine article.' Knowing thus the age, quality, and process of culture of every plant, *the supply from their grounds is recommended with great confidence.*"

*** Since the date of the "REPORT" from which the above is abstracted, the ENTIRE ESTABLISHMENT has been GREATLY ENLARGED. The collection of Camellias embraces all the finer kinds, and consists of some thousands of various sizes; so likewise of Roses, and other desirable plants, both tender and hardy—Fruit Trees, &c.

The *Seed Gardens* alone, cover *fifty acres*, and the whole is, as it has been for more than *half a century*, under the successive management of father and son, the *most prominent in America.*

Orders for Trees, Plants, &c., in all their variety, from the Nurseries, now conducted by D. LANDRETH & FULTON, received as above; where, also, Catalogues may be had, gratis. 2t

---

FOR SALE AT

## D. O. PROUTY'S

## Agricultural Implement Ware-house,

194½ *Market Street, Philadelphia.*

Every variety of Agricultural and Horticultural Implements in general use, of the most approved patterns and superior workmanship, at *extremely low prices.* A full assortment of the *Prouty & Mears'* Centre Draught, Self-sharpening, right and left hand, subsoil and side hill, Wheel and Swing Ploughs, with points and shares so strong and thoroughly purified and hardened, that one hundred acres of land have often been ploughed with a single set, at an expense of 50 to 62 cents. These ploughs are constructed of the best materials and of the highest finish; and for *ease of draught* and *management*, the facility with which their points and shares are turned and sharpened, the eradication of weeds and the thorough cultivation of the soil, they stand unrivalled in the market. They are warranted to work in any soil, and to give perfect satisfaction after fair trial, or they may be returned, when the purchase money will be refunded,

☞ *Agricultural, Horticultural* and *Flower Seeds*, in great variety, raised expressly for this establishment, by careful and experienced seed growers, and warranted. Several new and superior varieties of seeds, as *Guernsey Parsnip, Sprotsboro Cabbage*, Early *Vanack Cabbage, Union-head Lettuce, Seymour's new Giant Celery, Flanders Spinach, large white Carrot*, PRINCE ALBERT PEAS, BRITISH QUEEN PEAS, Dickson's Ruta Baga, &c., &c.

March 14th, 1846. 2t.

---

NEW

## Horticultural and Agricultural Ware-house,

84 *Chesnut Street below Third, South side.*

The subscriber has for the better accommodation of his customers, opened the above ware-house, with a large stock of Garden and Field Seeds, crop of 1845. Implements and Books on Gardening and Farming; he calls the particular attention of farmers to his pure stock of Sweede Turnips, Field Carrots, Beets and Parsnips, Pruning Shears, Saws and Knives.

March 14th, 1846.—1y. R. BUIST.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

| | |
|---|---|
| THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price | $3 50 |
| YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions; | 2 00 |
| BRIDGEMAN'S GARDENER'S ASSISTANT; | 2 00 |
| THE AMERICAN POULTRY BOOK; | 37½ |
| THE FARMER'S LAND MEASURER; | 37½ |
| DANA'S MUCK MANUAL; | 50 |
| Complete sets of the FARMERS' CABINET, half-bound, 9 vols. | 7 50 |
| DOWNING'S Landscape Gardening, | 3 50 |
| Downing's Fruits and Fruit Trees of America, | 1 50 |
| SKINNER'S Every Man his own Farrier, | 50 |
| AMERICAN Poulterer's Companion, | 1 25 |
| BOUSSINGAULT'S RURAL ECONOMY, | 1 50 |
| FARMERS' & EMIGRANTS' HAND-BOOK, | 1 00 |
| MORRELL'S AMERICAN SHEPHERD, | 1 00 |
| STABLE ECONOMY, | 1 00 |
| BEVAN on the HONEY BEE, | 31¼ |
| BUISTS' ROSE MANUAL, | 75 |
| SKINNER'S CATTLE & SHEEP DOCTOR, | 50 |
| AMERICAN FARRIER, | 50 |
| THE FARMER'S MINE, | 75 |
| HOARE ON THE VINE, | 62½ |
| HANNAM'S Economy of Waste Manures, | 25 |
| LIEBIG'S AGRICULTURAL CHEMISTRY, | 25 |
| " ANIMAL CHEMISTRY, | 25 |
| " FAMILIAR LETTERS, | 12½ |

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

## GUANO.

Twenty-five tons first quality Ichaboe Guano, in bags or barrels, for sale in lots to suit purchasers, by

S. & J. J. ALLEN & CO.,
No. 7 South Wharves, 2nd Oil Store below Market street, Philadelphia.

October 15th, 1845. tf.

## Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the Farmers' Cabinet, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, for seven barrels or more, $1 75 per barrel, containing four bushels each. Any number of barrels less than seven, $2 each, or thirty-five cents a bushel. Orders from a distance, enclosing the cash, with cost of porterage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it.

JOSIAH TATUM.

### CONTENTS OF THIS NUMBER.


| | Page |
|---|---|
| Use of Guano. | 265 |
| Consideration of Light. | 268 |
| Philadelphia Agricultural Society—its Premiums. | 270 |
| To make Fruit Trees thrifty.—Mildew or Blight in the Grape. | 272 |
| Forsyth's Composition.—Api Petit; or American Lady Apple. | 273 |
| Silk in Turkey.—How to lay planks on Bridges.—Fine Crop of Corn. | 274 |
| To make Pear Trees fruitful. | 275 |
| Transplanting Trees.—Orange county Milk Farm. | 276 |
| Hoare's Mode of Planting the Vine. | 277 |
| A Suggestion.—To prevent the Smoking of a Lamp. | 278 |
| James Gowen's System of Farming. | 279 |
| Preparation of Seed Wheat. | 280 |
| New Oxfordshire Buck. | 281 |
| Prepared Manures and their effects on Crops. | 282 |
| Fellenberg School at Hofwyl. | 284 |
| Rice Cakes. | 287 |
| Notes on the Vine,—by John M'Donald. | 288 |
| Agricultural Meeting.—Benson's Patent Water Ram. | 289 |
| Disease of Plum Trees. | 290 |
| Philadelphia Butter. | 291 |
| Editorial Notices. | 293 |



## THE FARMERS' CABINET,

IS PUBLISHED MONTHLY BY

JOSIAH TATUM, No. 50 NORTH FOURTH STREET, PHILADELPHIA.

It is issued on the fifteenth of every month, in numbers of 32 octavo pages each. The subjects will be illustrated by engravings, when they can be appropriately introduced.

Terms.—One dollar per annum, or five dollars for seven copies—*payable in advance.*

All subscriptions must commence at the *beginning* of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For six dollars paid in advance, a *complete set* of the work will be furnished in numbers, including the tenth volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly *half-bound and lettered* Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage. To any Post office within thirty miles of Philadelphia, they will go free of charge.

Joseph Rakestraw, Printer.